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Military Affairs

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CIS/RUSSIA ARMED FORCES

Proposal To Raise Draft Age

92UM1203E Moscow VESTNIK
PROTIVOVOZDUSHNOY OBORONY in Russian
No 4-5, 92 pp 28-29

[Article by M. Arsenyeva, candidate of juridical sciences:
"Who Is Old Enough To Serve?"]

[Text] Those studying the causes of mutual relations that are at variance with regulations (military sociologists, psychologists, jurists, criminologists) note that manifestations similar to "dedovshchina" [hazing of conscripts by conscripts with more seniority] are common among children and teenagers in schools, boarding schools, vocational-technical schools, tekhnikums, youth dormitories, and in closed educational institutions for minors who have violated the law. It is also obvious that the young man we draft into the army is not yet an adult. There is much about him that is unsettled and childish. By the age of 18 he has not yet grown strong physically and mentally, has not matured enough to fully understand his duty to society. He does not yet have enough worldly experience.

The experience of the Great Patriotic War showed that the youngest, when they ended up at the front, also proved to be the most vulnerable and unable to adjust easily to act under extreme conditions. And this, in addition to other reasons, resulted in almost totally wiping out an entire age group of the country's male population. Only three percent survived. Naturally, the losses were also great in other older age groups, but not as significant. In such conditions, more mature soldiers are more wary, more cautious, and less likely to put themselves at risk. This was also confirmed by the "undeclared" war in Afghanistan.

The fact that a person who reaches the age of majority does not immediately become an adult is also evidenced by the trends in our legislation. It considers young people who have not reached the age of 21 years not to be sufficiently mature in mental, social, and physical development. The law, for example, authorized persons serving a sentence in a VTK [expansion not given] and having reached to the age of majority (18 years) to remain in the VTK to serve out the sentence until reaching the age of 20 without transfer to a corrective-labor colony [ITK]. Beginning in 1985, restrictions on the sale of alcoholic beverages applied to individuals under the age of 21 years. These trends also can be traced in a number of European countries.

It is an indisputable fact that the true age of majority is not some momentary event tied to a date on the calendar, but a process that is sufficiently long in time. Thus, in determining the age of the draftee, should we not also take into account the degree of his special, mental, and physical maturity?

Apparently, the age of 20-21 should be considered the optimum age for serving in the army. At this age, a young man has matured sufficiently. A sense of his own dignity is also noticeable in him. The physical, mental, and moral status even out. The young man can stand up for himself. As a rule, a harmonization of the personality has been achieved by this age. All these qualities and characteristics are important for successful performance of military service.

Switching to a draft age of 21 years combined with reducing the length of service to 18 months, and to 12 months in the future, can ease the problem of mutual relations that are at variance with regulations among conscripts and minimize them if the reforms touch upon the conditions of performing military service.

In Tsarist Russia, strict obedience of command personnel by soldiers was ensured by implementing a special policy—by separating the army from the life of the rest of the country, including purely mechanically—by moving the conscripts an average of 1,000-1,500 km from their regular residence. Servicemen were sent to areas where they usually had no ties and where the population often belonged to a different nationality. The barracks regime reinforced the separation to the utmost: it was very close to prison conditions; all strangers were forbidden access to the barracks; leaving the unit was made difficult by the need to have various authorizations and was permitted only for a short period; newspapers, other than those authorized, were not allowed; correspondence was controlled.

The excessive secrecy of army life has already been removed. This makes it possible to take another step towards openness and control of the army on the part of civilian society, primarily by changing the conditions of performing military service: a soldier should serve close to his permanent place of residence and have the opportunity to be at home among relatives and friends on his days off. This will signify a step towards eliminating the artificial isolation of the soldier from civilian society.

Our Information

The Law on Compulsory Military Service (1925, new version of 1928) established the age for induction into active military service at 21 years.

The Law on Universal Military Service (1939), passed on the threshold of the Great Patriotic War, lowered the draft age to 19 years, and the draft was held once a year.

The Law on Universal Military Service (1967). Despite the change in the situation and on the threshold of "detente," the draft age was lowered to 18 years.

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Volga-Urals MD Split, New Appointments in Russian Military

92UM1301B Moscow KRSNAYA ZVEZDA
in Russian 23 Jul 92 First edition p 1

[Report from the Press Center of the Russian Federation's Ministry of Defense: "New Appointments in Russia's Armed Forces"]

[Text] Two districts, Volga and Ural, have been formed out of the Volga-Ural Military District.

The following are appointed commanders of these districts by decrees of the President of the Russian Federation:

Volga MD—Col Gen Anatoliy Ipatovich Sergeyev; Ural MD—Col Gen Yuriy Pavlovich Grekov.

A new chief of Rear Services of the Armed Forces of the Russian Federation has also been appointed. He is Maj Gen Vladimir Timofeyevich Churanov.

A number of other appointments were made. Col Gen Leontiy Vasilyevich Kuznetsov was appointed commander of the Moscow Military District; Col Gen Leonid Sergeyevich Mayorov, commander of the Northwest Group of Forces; Col Gen Leonid Illarionovich Kovalev, commander of the Northern Group of Forces.

Disposition of Russian Troops in Lithuania Detailed

92UN1724A Vilnius LIETUVOS RYTAS in Lithuanian
12 Jun 92 p 1

[(ELTA): "How Much of the Army of the Former USSR is in Lithuania?"]

[Text] The Staff of the Northwest Group of Forces informed the Ministry of Defense at the beginning of this year that the total was 34,582 officers, non-commissioned officers, and soldiers. Ministry officials believe that this figure understates the actual total considerably, but thus far no opportunity has been made available to them to verify the data.

One hundred three soldiers left Mickunai and Visorius on 2 March in 36 military vehicles. In a way, this seemed to be the start of the military withdrawal that Vytautas Landsbergis, Chairman of the Supreme Council of the Republic of Lithuania, and Russian President Boris Yeltsin had agreed upon on 17 January in Moscow. However, only 253 servicemen were withdrawn in the first three months. At this rate, it would be 30 years before the last soldier left Lithuania!

The tempo has "quickened" as the referendum, and especially as Boris Yeltsin's visit to Washington (scheduled for mid-June) approach: the airborne instruction center has moved out of the settlement of Rukla in Jonava district, and some of the tanks, armored vehicles and ammunition have been removed from Pabrade.

When they finish the school year, the students at the advanced radio electronics school are scheduled to leave Vilnius. And that is it.

Meanwhile, about 500 new recruits have been brought to the airborne military instructional units stationed at Kazlu Ruda. So there is as much of the Russian army now as there was before. There is a strong army garrison in every sizeable Lithuanian city.

Where in Lithuania is the former USSR army stationed?

- Vilnius: 107th motorized infantry division;
- Kaunas: 7th airborne division;
- Klaipeda: a coastal defense division (formerly the 3rd motorized infantry division. In 1988, when Mikhail Gorbachev was "fulfilling" his promise to the Americans to reduce the size of his ground forces, the infantrymen were transformed into sailors);
- Siauliai: an aviation regiment with an enormous military airfield;
- Panevezys: the staff, aircraft, and ground support units of an aviation transport division;
- Alytus: a regiment of the 7th airborne division;
- Marijampole: another regiment of the 7th division;
- Kedainiai: a part of the transport aviation forces;
- Ukmerge: two regiments of the 107th motorized infantry division;
- Plunge: the rest of the heavy artillery brigade.

These are just the larger garrisons in cities. Their units are dispersed in almost 180 military compounds—frequently in the most beautiful places in the Republic—that citizens of the Republic of Lithuania are still prohibited from entering. Those areas occupy a total of 68,000 hectares.

At the late May meeting in Moscow between the Lithuanian and Russian state delegations, a bill was presented for the damage done to the people and economy of Lithuania by the former Soviet army, which, since the beginning of this year, falls under the jurisdiction of Russia. It is not a small sum—147 billion dollars—despite the fact that it is by no means comprehensive. The sum will be revised after experts are able to assess the ecological condition of the areas where military units are still located.

That will be done when the foreign army is gone from those areas.

Every "Yes" vote in the 14 June referendum by secret ballot will bring that day closer.

CIS: AIR, AIR DEFENSE FORCES

Editorial Comment on Air Defense Troops' Day

92UM1203A Moscow VESTNIK
PROTIVOVOZDUSHNOY OBORONY in Russian
No 4-5, 92 pp 1-2

[Editorial by Colonel M. Zakharchuk, chief editor: "We Have Duty and Honor, or Not Very Festive Thoughts Regarding the Upcoming Air Defense Troops' Day"]

[Text] Good heavens, what kind of times are these? I wanted to verify the date of our professional holiday (I am writing these lines in mid-February). I flipped through the desk calendar. And such a melancholy suddenly came over me that it is difficult to convey in words. It turns out that almost all the red-letter dates recorded in the yearbook last year have been abolished. It is problematic whether our day will remain. But on the other hand, we already know, dear fellow fighting colleagues, we no longer belong to the country's Air Defense Troops, since it is no longer, our long-suffering country, which abundantly shed tears and blood. The empire has collapsed. It has broken down into many states under hooting and gloating whistling. And the end of this breakup is not in sight because not all okrugs and aymaks have gained their sovereignty, and presidents have not yet been elected everywhere.

You and I, dear friends, did not pay heed as we became victims of national-idiocy and farmstead and small-town cretinism. I am aware of how non-traditional expressions I am using. It is hard to characterize what is now taking place in nearly all remote areas of the former USSR (and in the center as well) using normal lexical terms. And the longer one lives in this chaos, the more firmly convinced one becomes that we have reached the top of the many people who have become greedy over power. Although, I agree, not all of them have completely and totally shown their worth. As of today, blood is being shed only in Georgia, Karabakh, and Chechen. We have not yet reached the Soviet-style Yugoslav variant...

Well, add here the most total collapse of the economy and the degeneration in social relations, and you will have a depressing display, against the background of which we are forced to talk about our vital deeds, or more precisely, about our professional holiday.

It will be sad, if it is at all. Indeed, why rejoice if several large units of the Air Defense Troops have already been lost. From all appearances, we will be the first to withdraw our subunits from the Baltic region. We do not cooperate at all or almost not at all with the former countries of the socialist camp, which has made our aerial borders not simply vulnerable but has caused them irreparable damage. Besides everything else, the Air Defense Troops will be reduced by more than one-third. Thank God that they at least will be preserved as a unified and indivisible structure with centralized command and control. It was simply some kind of miracle that the sword of Damocles did not fall on our heads last year.

But then again, this had nothing to do with a miracle. It turned out that there were simply a few more sensible, bold, and decisive people in the top echelons of state power collapsing at that time than there were very bold and not very bright swordsmen-cavalrymen for whom our valiant armed forces have always been famous and whom you also cannot accuse of lacking boldness. It is just that the boldness of such military leaders is always

akin to foolhardiness. They wave sabers, chop firewood, and then thousands and millions of people eat up their "innovations."

Remember how we carved up the ships of the Navy, how we cut up the new fighters with sledgehammers, how we sent Lieutenant-Colonels to feed hogs on kolkhozes, how we reduced the Army and Navy by millions all at once. Then, true, we drove the "voluntarist" from the top state posts and, having tightened our belts, began to eliminate the "shortcomings committed." These shortcomings had become a way of life for us, and we never in our life considered the people's money. Something else proved much worse: Khrushchev's petty tyranny inflicted irreparable moral and political damage on the armed forces.

In 1967, the editorial staff of KRASNAYA ZVEZDA decided throughout the jubilee year of Soviet power to publish articles on representatives of military dynasties. The noble idea was not destined to be implemented. The link of great-grandfather, grandfather, father, son, grandson had gaping voids in each level. It suddenly stopped altogether with the grandsons. Officers stopped sending their sons to military schools. That is what the Khrushchev innovations did for us. I write about this in such detail because breaking up the Air Defense Troops to the very foundation was precisely another such innovation. Its authors, under the guise of supposedly continuing reform in the armed forces, tried to distribute our "PVO" structures among the military districts. Of course, this action was furnished with all sorts of near-scientific arguments, cheap demagogic "concern about reducing the burden of armament," and other propaganda tricks.

It is quite possible that such propaganda achieved the desired effect on some of my fellow countrymen. I also do not rule out the fact that some may accuse me of protecting the tunic. They say, there is a reason the nightingale warbles, it is protecting its feeding trough. Let us make no hasty conclusions and examine this abstract example.

You have an umbrella. It is not of the latest Japanese version, which opens and closes with the same button. But it is still a fairly reliable and sturdy thing. You also use it from one rain to the next. If someone else in the household needs the umbrella, no problem. But suddenly there is this well-wisher who not simply advises but insists: cut the umbrella into segments and distribute them among your friends and relatives. This will be better for both you and them.

They tried to do something similar with our troops. And considerable efforts of many people were needed to block this undisguised recklessness. On the threshold of the holiday I cannot help but name with gratitude the names of Russian President Boris Yeltsin, President of the former USSR Mikhail Gorbachev, former Chairman

of the former KGB Vadim Bakatin, President of Kazakhstan Nursultan Nazarbayev, and Commander-in-Chief of the CIS Armed Forces Yevgeniy Shaposhnikov. Special credit in preserving the Air Defense Troops belongs to our commander, Viktor Prudnikov. Sometime when I am no longer his subordinate, I will describe in all the details known to me the courage of this man. For now, I will talk about something else.

There never were any cloudless periods in the history of our troops. However, the present times are almost the most difficult. The dilettantism of those leaders who have come to power today in the former Soviet socialist republics threatens the air defense system, which took so long and such improbable tension to create, with total collapse. Russia is the only hope in this sense. Only Russia is able to preserve the nucleus, the framework of the aerial shield, under whose cover everyone who is slamming the doors so loudly today will come sooner or later. For you do not have to be either a state husband or strategist, or even the smartest man in the world to understand the simple truth: any state will need the Air Defense Troops even when there is no longer any need for other branches of troops. It is also true that many of the former republics now have no or almost no decent air defense.

No matter, the nationalistic passions will subside, the erratic behavior and chaos will be replaced by life-giving creation, the ambitious and not very bright politicians will be replaced by people who are serious and wise in state matters, and they are the ones who will begin to restore what was pulled down. Let us help them, the future leaders, with our present labor, our conscientious attitude towards our assigned job, with our present-day responsibility. We people of the service and the state have duty and honor—concepts, unfortunately, that are old-fashioned. But we know their true, non-transient value. We know that besides us there is no longer anyone either to keep our troops combat-efficient or convince the powers that be of the vital necessity of these troops for the state.

It is extremely complex to carry out this mission during this difficult time of social cataclysms. But we must. We must on holidays and especially on weekdays. It is with this thought on the day of our professional holiday that we toast our long-suffering Air Defense Troops. Just as it is in the song: "so the head does not ache." The next morning, gritting our teeth and even reluctantly, we will go our separate ways to our management positions and duty stations. You and I belong still to special troops. They stand combat duty during peacetime, too.

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Shortage of PVO Specialist Personnel

92UM1203B Moscow VESTNIK
PROTIVOVOZDUSHNOY OBORONY in Russian
No 4-5, 92 pp 11-12

[Article by Lt Col I. Vakhnov: "When the Lock on the Skies Rusts"]

[Text] The author of the comments presented makes no claim to first discovery: the problems which he touches upon are well-known to those who perform alert duty in air defense [PVO] units. On the one hand, they are outraged by them; on the other, they justify them by "objective difficulties." But, apparently, the time has come to admit that these problems are an attack by the rust which is slowly but surely corroding the lock to the country's skies.

For Yourself and for the Other Guy

The next shift arrived at the command post of the large unit where Lt Col O. Kozlovich is chief.

The shift...

This concept has for a long time been relative in nature. Judge for yourself. Instead of the agreed six hours, many specialists stand alert duty for 12 hours running. They do not come up from the underground facility for days.

For example, it has already become the norm that one plotter works for two. The other has settled down here in a specially equipped resting room so he also can assume a double workload in a few hours.

At certain work stations, officers work for soldiers and noncommissioned officers: Capt I. Makhmutov, Sr Lt A. Zakharov, Sr Lt A. Nikitenko, and others. As they say, for yourself and for the other guy. But where are those other guys?

"They simply do not exist," says Col N. Boganov, deputy chief of staff of the large unit. "We are very undermanned in compulsory-service specialists standing alert duty, almost 50 percent. Why? Last year, we discharged into the reserve 33 soldiers and NCO's, and received only five draftees. And this shortage is becoming permanent."

The critical shortage of specialists is such that there is no time to train the newcomer properly. He barely has time to put on his uniform before he begins alert duty. He also learns his military vocation at his own pace. For example, for the young soldier V. Kotelnyy, assigned to the position of long-range communications mechanic (and not only for him), the first special training class began on alert duty. Pvt A. Gusev, drafted only six months earlier, became his teacher. The officers would be happy to help, but as was already mentioned, they themselves are working for two and sometimes three people on alert duty.

While we are talking about officers, the problem with them has also gotten worse in the last couple of years.

Young people are leaving the Army. Just recently Capt V. Marinichev, Sr Lt V. Dorozhkin, and Sr Lt V. Kostyuchenko, leading automated control system specialists, recently applied for discharge. The reasons are known: the unsettled state of everyday life, uncertainty about the future, dissatisfaction with material conditions. And with their specialties and level of training, they are in great demand in civilian life. True, they will receive much more there for their labor. Sr Lt Dorozhkin has an example in front of him. His father, a former officer, was recently discharged from the Army and got a job at a joint venture. He now earns two to three times his previous monthly salary...

Several years ago, having enrolled in a military school, the son followed in his father's footsteps. That is what he is doing now, too. It is hard to blame the younger Dorozhkin for this.

But another question arises: For how many guys will each of those who remains at the command post have to stand alert duty for tomorrow? And will they be able to handle their combat mission?

A pair of telephone operators work on the alert duty shift in the communications center—Sgt L. Krasikova and Jr Sgt L. Zholudeva. Two people for eight instruments. As it turns out, the problem is the same—a shortage of specialists.

"But for us this is not the biggest problem," says Lyubov Nikolayevna Zholudeva. "There are, of course, great rushes, but we have a high class. We have achieved harmony in work and wriggle out the situation. Another thing is distressing—the equipment. It breaks down often..."

In an adjacent room, the chief of the telegraph section, Capt M. Gayduk, and soldiers were practicing some magic on two disassembled pieces of equipment.

"By today's standards, they are simply antediluvian," the officer remarked. "They still use tape, although civilian telegraphs have used rolls for a long time. Furthermore, they are completely worn out. We repair them every day, and with a total lack of spare parts. Here our skilled craftsmen help out."

It turns out that it is not only difficult to get spare parts for the ancient equipment, but also adhesive tape. As Zholudeva confessed to me, she managed by chance to get hold of a couple of rolls of this tape at some provincial town at an impoverished post office. She takes them to alert duty and uses them sparingly, when it is required to receive a large volume of information immediately. Usually they use simple paper tape, which they have to swab with glue, which takes a lot of time. This is indeed the old-fashioned method.

It is roughly the same story with the automated control system equipment at the command post. Its warranty period ran out many years ago. If they manage by hook or by crook to get a unit or board that has broken down,

they consider it a great success. You see, this equipment is no longer taken in for capital repair, since it has long been considered obsolete.

As Maj A. Sulpovar admitted, his skilled craftsmen cannot always do the job. In order to fabricate or repair some complex part, they have to look for a modern left-handed person outside the garrison, at various enterprises and plants. Payment is most often made with the hardest "currency" we have—half-liter bottles. The expenditures, of course, are from our personal budget.

What kind of units, boards, and electronics are they? As I was told at the headquarters, last year not a single request for equipment of the command post's life-support systems was filled, to say nothing about pumps and fans. They were not allotted ordinary light bulbs. Incidentally, there are several hundred of them in the command post. They burn round-the-clock and have a tendency to burn out.

Sometimes the officers go to alert duty with a bulb in their pocket taken from a household lamp. Amusing? Possibly, if it were not so sad.

Instead of a Postscript

As far as I know, all these troubles are characteristic not just of this command post. What can you do, says another reader, the times are such. There is a shortage of draftees throughout the armed forces. Cuts are being made in the Army again, and there is conversion: we must save the people's money, and there is not much. The entire country has tightened its belt, and PVO is supposed to be shown special favors?

I agree. But this is from the one side. Let us look from the other side.

Yes, we do not need an overblown army. However, when reducing any branches of troops, the air defense system (regardless of which organizational structure it belongs to in the future) must be strengthened. If not numerically, it must be qualitatively. Without this we cannot achieve defense sufficiency for the country. But what kind of quality can we have if they stand alert duty in PVO (and this is not the first year) using decrepit, obsolete equipment. After all, similar equipment in civilian life meets the most modern requirements. Does this mean that the Air Defense Troops are being supplied according to the residual principle? Do they think we do not need it? Do they think that because the people are military, they can endure? A serious mistake.

Why not allocate the money for what is most needed today for performing alert duty from the funds being received through this same conversion. If a military plant that was producing complex electronic equipment is switched to producing frying pans, this is indeed difficult to do

rdNow about the people. Impressive sums from the military budget are spent on training officers—PVO specialists. But after a year or two passes they apply for discharge. They are not in pursuit of more money, but normal living conditions. And the best ones are leaving.

Yes, we all know the objective reasons for the shortage of draftees; it is a common problem. But a solution can also be found here as applied to alert duty at command post. Employees of the Soviet Army or female service members could be used for many specialties of compulsory-service soldiers. However, it is increasingly more difficult to entice them here with the kind of money which the financial bodies have at their disposal.

So again it all comes down to money? But where do we get it? I will put it this way. Even the poor but farsighted owner will first find money for a lock that works and then for his daily bread. In our state, the bread may not be plentiful, but there is some. But the lock to the country's skies is obviously rusting.

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Tension vs Error Probability in Air Defense Battle Launches

92UM1203C Moscow VESTNIK

PROTIVOVOZDUSHNOY OBORONY in Russian
No 4-5, 92 pp 19-20

[Article by Col A. Golubev, candidate of military sciences: "An Automated Control System Helps"]

[Text] The combat work of crews in conditions of modern air defense battle is distinguished by extreme tension and limited time for situation assessment, decisionmaking, assigning a mission, and carrying it out.

The surface-to-air missile systems entering service have a level of automation which makes it possible to increase the rate of fire to a considerable degree. Therefore, the question of patterns in erroneous actions of the launch control officer [LCO] moves to the forefront.

Let us imagine that at some period of time when waging an air defense battle, the LCO will not participate in assessing enemy actions and, relying entirely in the surface-to-air missile [SAM] system's automated control system [ACS], merely relays commands from the higher command post to the combat crew. Then, based on the reliability of the ACS and the level of training of the SAM crew, we can determine the possibility of error of the ACS, which in this case leads to passage of the target during a specific unit of time.

In a combat situation, the LCO must react in a timely manner to the actions of the airborne enemy and also preclude errors of the combat crew which may lead to passage of the target. Mistakes by the LCO can be divided into two categories. The first is passage of the target without involvement of the LCO. For example, incorrect selection of a target for firing which is outside the missile launch zone. The second is actions of the LCO which can be classified as incomplete use of the SAM system's fire capabilities.

It is feasible to determine the reliability of the LCO's actions during an air defense battle by using reverse probability of error of actions of the former.

Research has shown that miscalculations by LCO's during an increase in load have the shape of a parabola (Figure 1).

We will draw a quantitative description of the dependency shown in Figure 1 by using the method of reference points.

Figure 1. The X-axis is the degree of combat tension; the Y-axis is the LCO error probability.

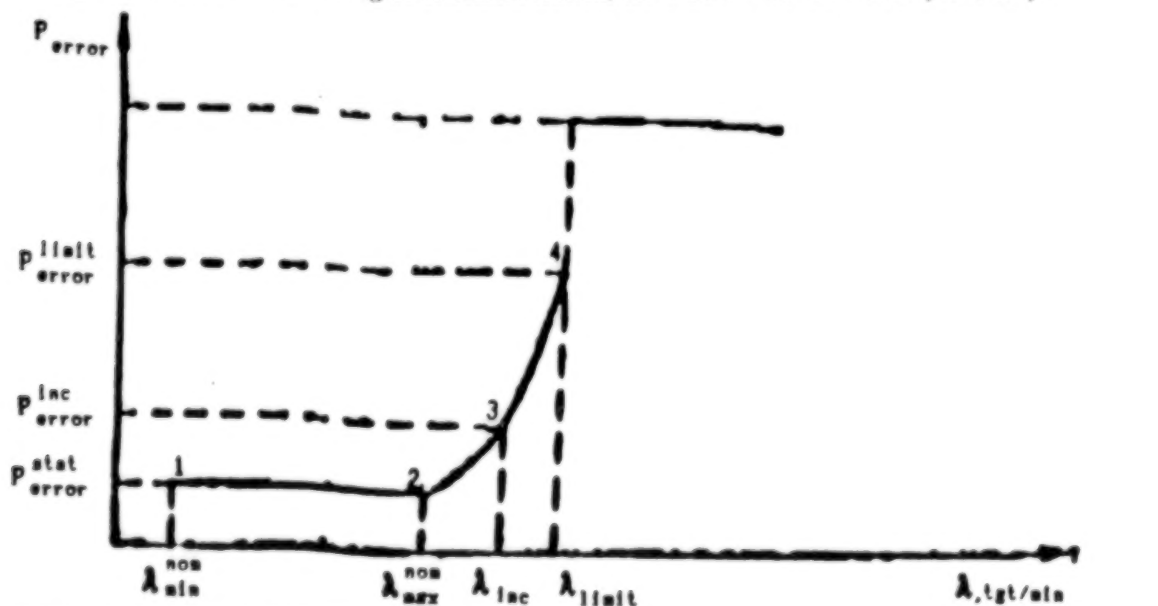
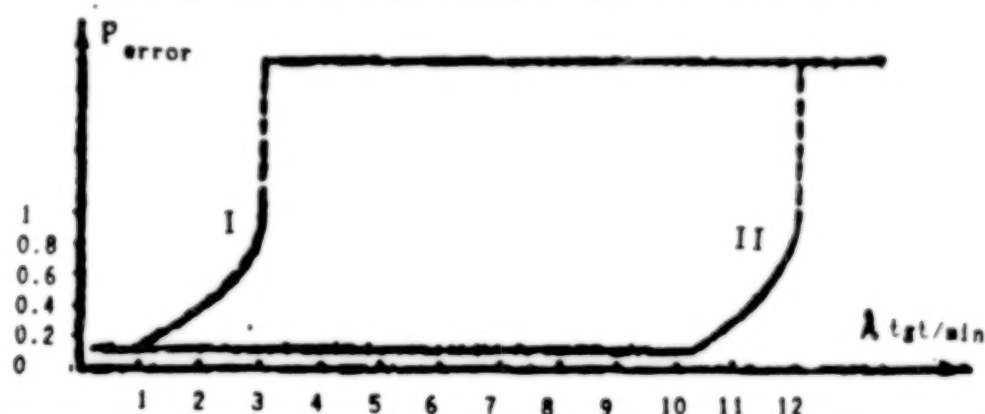


Figure 2. Dependence of the probability of erroneous actions of the LCO depending on the combat tension for SAM systems with different levels of automation; type I and II SAM systems.



There are four of them in all. The first is marked on the Y-axis—the error probability of the LCO is stationary ($P_{\text{error}}^{\text{stat}}$).

The second is the increased error probability ($P_{\text{error}}^{\text{inc}}$). The third is the maximum error probability ($P_{\text{error}}^{\text{max}}$). The four reference points are indicated on the X-axis. Successive examination of them makes it possible to single out the coordinate of the first point as the minimum nominal combat tension which characterizes the start of the nominal load on the LCO.

This point is the boundary between the two conditions of activity of the LCO: work in conditions of monotony (firing on single targets over a long period of time)—the segment 0 divided by $\lambda_{\text{min}}^{\text{nom}}$; in conditions of nominal combat tension—the segment $\lambda_{\text{min}}^{\text{nom}}$ divided by $\lambda_{\text{max}}^{\text{nom}}$.

The coordinate of the second reference point—maximum nominal load of $\lambda_{\text{max}}^{\text{nom}}$ —characterizes the end of the LCO's nominal load section.

The coordinate of the third reference point—increased combat tension λ_{inc} —determines the value of combat tension for special conditions of the LCO's activities.

The fourth coordinate on the X-axis—the combat tension limit λ_{limit} —determines the value of combat tension which if exceeded leads to disruption of the LCO's activities.

In order to exclude an indefinite value of P_{error} when λ is greater than λ_{limit} in models describing an air defense battle, it is assumed that the value of P_{error} is equal to one.

To establish the probability of erroneous actions by the LCO in conditions of combat tension when using SAM systems with different levels of automation, survey methods were used. The results made it possible to determine the structure of the air situation in which each officer worked, the type of SAM system, and also an

estimate of the values of the coordinates ($P\lambda$) of each of the reference points depicted in Figure 1. Main attention is given to obtaining data according to reference points 1 and 2 and the value of λ_{limit} for point 4.

The number of officers surveyed was 48, and 98 launches were analyzed. The data from this analysis were used to obtain the coordinates of reference points 2-4.

When comparing the expectation mean values of P_{error} for variants of SAM systems types I and II, done according to t (the Student t -test), it was discovered that there was no significant difference even for $\alpha=0.20$, which makes it possible to draw a conclusion about the invariance of erroneous actions of the LCO on the level of automation of the SAM system at low (nominal) combat tension.

Note:

Type I SAM system—minimal automation of process of waging an air defense battle.

Type II SAM system—maximum automation of processes of waging an air defense battle.

In addition, in the section $\lambda_{\text{max}}^{\text{nom}} < \lambda < \lambda_{\text{limit}}$, the increase in values of the function $P_{\text{error}} = \Phi(\lambda)$ with a proportional change of the argument is practically identical for the different types of SAM systems, which makes it possible to switch to a single analytical description of this dependence.

Using known methods of approximation made it possible to obtain the following expression:

where N_{tgt} is the average number of targets entering the SAM launch zone simultaneously;

T is the average time a target stays in the SAM launch zone.

It must be noted that with such a description, the accuracy of determining the probability of erroneous actions of the LCO decreases when the value of combat tension approaches the limit values.

$$P_{\text{error}} = \begin{cases} 0.01 & \text{when } 0 < \lambda < \lambda_m \\ 0.01 + 0.006 (\lambda - \lambda_m)^2 & \text{when } \lambda_m < \lambda < \lambda_{\text{limit}} \\ 1 & \text{when } \lambda > \lambda_{\text{limit}} \end{cases}$$

where λ_m is the parameter depending on the SAM system's level of automation;

λ_{limit} is the limit value for the realized level of automation of the SAM system;

$$\text{Here } \lambda = \frac{N_{\text{tgt}}}{T};$$

Thus, the disclosed pattern should be regarded as one of the first steps toward improving professional training of LCO's in conditions of an increase in the level of automation of SAM systems.

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Air Defense vs Air-to-Ground Weapons in Initial Period of Battle

92UM1203D Moscow VESTNIK
PROTIVOVOZDUSHNOY OBORONY in Russian
No 4-5, 92 pp 21-22

[Article by Maj-Gen Avn N. Kozlov, candidate of military sciences, docent: "PVO: Quo Vadis? (Where Are You Going?)"]

[Text] Weapons and weapon systems created in the armies of developed countries and used for making strikes against ground targets from the air enable the enemy, already at the start of military operations, to accomplish such major tasks as disrupting military command and control and state administration, destroying a considerable portion of the nuclear missile potential, suppressing the air defense system, and destroying the main air force and naval force groupings.

The initial period of war will be characterized, above all, by a fierce struggle of the sides for air and space superiority. The side that is victorious in this struggle can conduct intensive actions virtually unhindered to disrupt command and control and undermine the enemy's military and economic potential. Successful conduct of the first phase of the initial period of war, namely the air and space phase, ensures favorable conditions for exploitation of the success by ground and naval forces. This was demonstrated convincingly by the

multinational forces in their recent war against Iraq. For 38 days combat operations were conducted in the form of an air and missile offensive, during which the country's most important military, military-economic, and administrative-political facilities were destroyed. The ground forces were not active during this period.

Can such a variant of conducting military operations be typical for a war against our country?

I think it can.

Before, the enemy did not have the capability to throw his entire aviation against facilities deep in our state, ignoring our powerful ground grouping. Somehow or other, he would be forced immediately to be drawn into land battles and use a considerable portion of his air forces for this.

In the changed conditions, an "air phase," and in the future a "space" phase, at the start of the war may prove to be most likely. Whoever thinks that the territory of Iraq and our country are incomparable, as a result of which the air offensive undertaken in the Persian Gulf region cannot apply to our country, may be dangerously mistaken. The vast territory, which many times has helped us to repel aggression in past wars, may not be an absolute guarantee of safety in today's conditions. Different times and different weapons. The potential adversary already now has powerful offensive air and space weapons and electronic warfare assets which are being developed at a rapid pace.

The conclusion about the possibility of fairly long military operations in the initial period of war using only offensive air and space weapons is also confirmed by the concept of conducting operations adopted in the United States. The main emphasis here is not on using the offensive capabilities of troops and manpower, but on the casualty-producing characteristics of weapons. Ground forces are not used until the necessary conditions for this have been created by air and fire strikes. And the role of air defense weapons here becomes quite obvious. Many very complicated questions arise when organizing air defense today.

It has been proven that there will be no winner in a nuclear missile war. Therefore, it makes no sense to discuss the problems of air defense or comprehensive antiballistic-missile defense in conditions of a nuclear attack. At the same time, the U.S. military program Air Defense Initiative (ADI), in which the technological and military achievements gained from the Strategic Defense Initiative (SDI) will be used, merits attention. The very appearance and development of the ADI indicates that the United States is preparing for a conventional war and considers it advisable to develop a national air defense even despite its special geostrategic location. We will also examine the possibilities of providing reliable protection of facilities and troops in a war using only conventional, albeit high-precision, weapons.

In this situation, reliable protection of facilities against enemy air strikes is a task that just is not immediately accomplished. However, at the present stage, it cannot be accomplished by the Air Defense Troops alone. It can be done only through the combined efforts of all services and branches of troops and special troops operating purposefully for the destruction and electronic suppression of attacking offensive air and space weapons.

At the same time, it is obviously impossible to build a "wall" along all our country's borders that is impenetrable for enemy offensive air and space weapons. It is also impossible to cover all the country's territory equally against air strikes. Today, the main efforts of the Air Defense Troops are concentrated on covering administrative-political centers, the most important industrial areas, and other installations. Their list is long and its growth was justified. But the compensation of air defense forces and, in the final analysis, achievement of the goals of air defense depend to a decisive extent namely on how many and what kind of installations these forces are concentrated.

Those installations which must be preserved to ensure the viability of the state and the combat effectiveness of the troops are the ones that must be most reliably protected against strikes from the air and space. Presently, the forces are scattered. If we are to develop an air defense system in accordance with existing approaches to determining the installations to be covered, we will have to increase the troop strength instead of reducing it. Therefore, it is necessary to reevaluate the importance of the installations of the country and the armed forces from the standpoint of their effect on the viability of the entire system of strategic defense. They work assume theoretical research, which has already begun.

And here are a few conclusions: the priority targets of enemy air and space strikes and, consequently, the most important installations for air defense will be large units of the Strategic Missile Troops and groupings of nuclear forces of Long Range and Frontal aviation and the Navy. Points of state administration and military command and control can be put second, and then the largest fuel and energy centers (powerful nuclear power plants, hydroelectric power stations, dams on major rivers, fuel storage facilities, and so forth), as well as major troop groupings on important operational axes.

As preliminary estimates have shown, these installations can be protected against air strikes without increasing the numerical strength of the Air Defense Troops but merely by more rational distribution of them.

Of course, reliable protection of these installations will require a qualitative improvement in armaments of the Air Defense Troops, which takes money. On the other hand, the destruction of one nuclear power plant will entail damages estimated in the billions of rubles, but the amount of expenditures for organizing air defense for this plant is one-thousandth of that amount.

If we manage to intensify the efforts of the Air Defense Troops in this manner, this would be the first step toward creating a new air defense system.

At the same time, it seems advisable already now to talk about creating a system of air and space defense of the country and its armed forces, which combines the intelligence, target and assets of all services and branches of troops, as well as the active assets of the Air Defense Troops, the Air Force, space and ground forces, and the Navy, capable of engaging the enemy in the air and in space. In doing so, it is necessary already today, no matter how difficult it may be, to give priority development to the space direction. We must concentrate scientific, material, and financial efforts in order to keep from lagging behind in this area.

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Use of New Forms of Radar Signals To Improve Target Detection

by M. V. G. Mironov (VVS/VA)

Prilozheniye k Zhurnal "VOENNOYE i Razved-
ka" No. 4, 1991, pp. 1-11

(English translation by Yu. Rukhovich and Maj. I. Melnik, "Advances in Radar, Certain Directions in Development of Radar Engineering.")

[This is a review of an article on increasing the effectiveness of detecting "stealthy" targets by the use of new forms of radar signals: binary, random, impulsive, "nonsinusoidal" signals and signals matched to the shape of the target.

The study of possibilities of radar operating without a carrier high frequency (H.F.) using outgoing pulses of nonsinusoidal or random (until recently) was done within the framework of theoretical or laboratory research. Subsequent radar attracted attention after 1965, when their merits were considered when working on low-observable aircraft. The two basic types of anti radar coatings—dielectric and ferromagnetic—currently existing, which decrease the radar cross-section (RCS) of aircraft through absorption and scattering of the incident energy, lose their properties when irradiated by nonsinusoidal signals. (For more details see VESTNIK PROTIVO-VOZDUSHNOY OBOBRONY, No. 8, 1991.)

The second type of radars operating without a carrier frequency are radar systems using probing signals matched to the shape of the target. In traditional radars, methods of matched filtering are used as the basis of signal processing. This involves comparing the signals reflected from the target with the delayed probing signal.

In the new radars, the probing signals are matched to the shape of the air target based on its pulse character. In one case, the radar reflections from a target of complex configuration (whose dimensions substantially exceed the length of the probing signal waves) are the

certain sum total of the echo signals from a number of point reflectors distributed over the surface of the target in a sort of random manner. Therefore, a model of a complex target may be a linear system whose pulse characteristic is determined by the configuration of the target, its spatial location, and the dynamics of flight. In practice, pulses a nanosecond in duration, including sinusoidal pulses, are used to form signals matched to the shape of the target.

The use of multiple frequency radars to detect low-observables has attracted the attention of foreign experts. The main reason is that these radars make it possible to receive a detailed radar "portrait" of air targets. The delta-k multiple frequency radar evokes the most interest. The essence of its operation involves the following. An object is irradiated by several (N) continuous signals simultaneously on different but fairly close frequencies having a small delta-k frequency shift, determined by the size of the structural elements of the object being irradiated. Receipt and processing of the reflected signals on each frequency are accomplished in independent narrowband channels and further for $N(N-1)/2$ are subjected to inter-channel cross-correlation processing. The signal at the output of the processing device of the delta-k radar is determined by Fourier transform from the complex function of electromagnetic wave reflection from a given target.

Any wideband signal can be processed similarly by isolating N sections of the spectrum using band filters and then cross-correlation processing at the output of these filters.

The appropriate sampling of frequencies depending on the shape and size of the object being irradiated makes it possible to obtain more accurate information about the object of detection and ranging. In addition, moving air targets at additional vibration components to the spectrum of the reflected signal, which can also be isolated as a result of processing in the delta-k radar using Doppler filtering. Thus, the advantage of multiple frequency radar is in the possibility of selecting a set of frequencies matched to the characteristics of the target.

Examining the advantages of changing one parameter (frequency) of the radar, foreign radar system designers proposed a concept of building a Multiparameter Adaptive Radar System (MARS) for detecting low-observables. It is based on changing three parameters in the process of functioning of the radar: the width of the antenna's directional pattern, the carrier frequency, and the polarization of the emitted signal. Trial operation of the MARS equipment, which used a 32-element linear phased-array antenna with a beam width of 1 degree, multiple frequency tuning between 9.0 and 12.4 GHz, simultaneous dual polarization of the emitted signal, made it possible to conclude the possibility of confident detection of low-observable flying vehicles (including altitude targets and cruise missiles) at an acceptable range and at angles of elevation comparable to the antenna beam width. Mathematical modeling of the

operation of such a radar showed that in the future the accuracy of target direction finding may be from 0.1 to 0.01 of the beam width at a sufficient signal-to-noise ratio.

Recently, foreign experts have been studying the possibility of detecting low-observable air targets by methods of holography.

A holographic radar system is an electronic device designed to receive a radar three-dimensional image of objects of detection and direction finding. The principle of its operation is that the multiple frequency radar signal reflected from the object is analyzed to determine the amplitude and phase of the wave front at each point. The wave front received in this manner forms a hologram of the object of detection and direction finding, which is recorded in the memory system. Then, using a computer device in the display system, the wave front is restored and an input three-dimensional image is formed. In doing so, redundant processing of the holograms is possible, which makes it possible to accomplish holographic identification of images and then identify air targets and the nature of the maneuver being executed.

Foreign experts are actively studying the possibilities of comprehensive use of information being received from sensors operating in different frequency bands. In the detection systems existing today, various types of sensors operate independently and scan space in different zones. The decision about the presence or absence of a target is made for each sensor independently without using data from other sources. The system will prove to be more effective with combined processing of information from various sensors simultaneously scanning a given zone of space.

When executing algorithms for combined processing of information from various sensors (for example, radar and infrared sensors), correlation of the signatures of detected targets and clutter is important. Thus, in the identification mode, target detection is considered reliable if the echo signals from them are recorded by different sensors and correlated between them. In the separation mode, where detection by one sensor is sufficient to recognize the presence of a target, detection is considered most likely if the target signature received by one sensor is not correlated (in the optimum case, anti-correlated) with the signatures received by other sensors.

Permanent echoes are evaluated on the assumption that clutter signals from terrain features are not correlated for various sensors, that is, a false excess of the threshold due to permanent echoes in one sensor does not mean the appearance of a similar signal in another.

Decisionmaking about the presence of a target is accomplished according to the results of combined data processing based on the processor and can be done

according to different algorithms, but based on correlation of data on the distance and Doppler velocity from different types of sensors.

Today it is hard to determine which of the methods of detecting low-observables will gain the advantage for solving this problem. It is possible that all the above-listed directions of developing radar systems and data processing equipment will find widespread application in future military systems.

Footnotes

*Conclusion. See issue No 1, 1992, for the beginning.

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Performance, Specifications of Tu-160 Heavy Bomber

92UM1283A Moscow KRASNAYA ZVEZDA in Russian
21 Jul 92 First edition p 2

[Article by Valentin Rudenko: "The Tu-160: A 12-Edged Sword"]

[Text] Specialists agree that the Tu-160 heavy multirole, missile-armed bomber, capable of operating under all conditions, with its variable wing geometry, is the most powerful aircraft system in the world. In combination with the Tu-95, which has been in service for 40 years, this craft constitutes one of the three elements of the domestic strategic triad, in which each element complements the others.

The Tu-160 is a fundamentally new aircraft, one that offers a number of indisputable advantages over other strategic missile-armed craft, including the American B-1. The design collectives of the ANTK imeni A. N. Tupolev and of other design bureaus and research institutes were successful in incorporating into the aircraft the features of the Tu-95MS, Tu-144, and the Tu-22M, in addition to world experience of creating this class of craft. What resulted was a missile-armed aircraft offering intercontinental range and a high power-to-weight ratio capable of carrying out highly diverse missions in a wide spectrum of speeds and altitudes regardless of meteorological conditions, time of day, and area of the globe.

A great number of nontraditional design solutions were employed in the Tu-160. Thus, applied for the first time in domestic aircraft design for flight control of the heavy craft were a handle, not a yoke, and an all-moving main fin and stabilizer. Originality is manifested in the design of the wing, which consists of long monolithic panels; also unique are the variable wing sweep assembly, the landing gear and inflight refuelling system. These features endow the Tu-160 with sophisticated aerodynamics and maximum utilization of internal space for carrying fuel, equipment, missiles, and bombs.

In contradistinction to the B-1, in the Tu-160 all the armament is carried in two special sections instead of

being suspended externally. A gem in the design of the missile-armed aircraft is a unique titanium pylon consisting of an all-welded torsion box for wing pivoting. All the aircraft's structural elements which bear loads and stresses are attached to the pylon.

SPECIFICATIONS

Gross take-off weight	275 tonnes
Maximum speed	2,000 km/h
Range (without refuelling)	intercontinental
Maximum useful load	40 tonnes
Wing span	35.6 to 55.7 meters
Length overall	54.1 meters
Height	13 meters
Service ceiling	15,000 meters
Armament (air-to-surface cruise missiles)	12 each

The Tu-160 possesses the capability of carrying a wide range of armament and cargo: cruise missiles, bombs of various calibers and applications. The aircraft even offers the possibility of launching "small" artificial earth satellites intended for economic purposes.

The bomber is powered by four turbofan engines developed by the N. D. Kuznetsov OKB [Special Design Bureau]

Constituting the aircraft's four-man crew are the commander, a copilot, and two navigators. The designers took pains to insure crew comfort during long flights. The craft is fitted with K-36 ejection seats.

The Tu-160 took to the air for the first time in 1981; in 1987 it was turned over to the Air Forces for flight testing. The aircraft's chief designer - V. Bliznyuk - and Chief Test Pilots B. Veremey, S. Agapov, V. Smirnov, N. Sattarov, and others, who put the craft through its paces, feel that the Tu-160 offers great potential.

Unfortunately, conditions being what they are, it is possible that series production of the Tu-160 may be curtailed. If this becomes a reality, then the invaluable experience acquired in the process of creating heavy bombers will be lost, and the strategic shield of our Fatherland will develop a crack which will be very difficult to fill.

CIS: NAVAL FORCES

Chernavin Orders Display of Andrew's Flag

92UM1219A Moscow NEZAVISIMAYA GAZETA
in Russian 27 Jun 92 p 4

[INTERFAXS Item: "St. Andrew's Flags Over Ships"]

[Text] Cinc Commonwealth Navy Admiral Vladimir Chernavin reported that the Andreyevskiy flags will be hoisted on all ships of the former USSR Navy on Navy

Day, 26 June. Speaking before graduates of the Naval Academy in St. Petersburg, Chernavin also declared that "the entire Navy must be taken under Russia's jurisdiction, with a subsequent transfer of the Fleet to central subordination of CIS forces."

In the CinC Fleet's words, today the majority of former USSR republics, including Byelarus and Kyrgyzstan, which have no egress to the sea, are laying claim to a division of the Navy.

Investigation Into 1968 Sinking of Submarine K-129

92UM1219B Moscow IZVESTIYA in Russian 4 Jul 92 Morning Edition p 8

[Part I of article by Nikolay Burbyga, IZVESTIYA, under rubric "IZVESTIYA Investigation": "The Submarine from 'Grave' Bay: The K-129 Did Not Come Up in Communications"]

[Text] When a Soviet submarine with ballistic missiles sank in the Pacific during alert duty in March 1968, many naval specialists believed that the loss of the K-129 was the secret of the century which under the most favorable conditions would be disclosed in about 50 years. But these forecasts were not destined to come true.

From the "NEPTUNE PAPERS No 3. Naval Accidents of 1945-1988": "A Soviet 'Golf'-Class diesel submarine with ballistic missiles aboard sank at a depth of 16,000 feet, 750 nm northwest of the island of Oahu, Hawaiian Islands. Approximately 80 persons perished.."

Just what could have happened to the submarine?

"The submarine (side number 574) returned from alert duty in late 1967," relates former CinC Pacific Fleet Admiral Vladimir Sidorov. "But two months later, if my memory does not fail me, they began to ready her again for departure into the winter sea. Officers were recalled from leave. The then CinC Navy demanded putting out to the ocean no later than 24 February, and on 24 February 1968 the submarine departed Kamchatka Bay, which translated from the French means 'Grave.'"

The PL-574 was a modern diesel-powered missile submarine for those times. She carried a missile complex of several high-power ballistic missiles as well as two torpedoes with nuclear ammunition. Experienced submariner Captain 1st Rank Vladimir Kobzar was the submarine commander. On 8 March the submarine did not transmit a control radio message at the designated time. An alert was declared in the Fleet. Combatant ships and search and rescue forces put to sea.

What could have happened to the submarine? I can only state a version, since the true reasons unfortunately have not been determined to this day.

Well then, on the evening of 8 March the submarine could have been proceeding in the most dangerous regime for an underwater ship, snorkelling, i.e., they

were sailing in the layer near the surface with the snorkel mast above water. At this time the broad air induction pipe extends upward from the conning tower sail, flap valves open and the diesels suck in marine ozone. In addition to the snorkel mast, two periscopes—skysearch and attack—as well as antennas protrude above the water. Since diesels are roaring at this time, all officers take turns observing the sea and sky through the periscopes. It is no simple matter to snorkel, let alone in the wintry ocean. The submarine could fall beyond maximum diving depth for one reason or another. And if memory does not fail me, that conclusion was arrived at by the state commission which studied the reasons for the submarine's loss.

The search for PL-574 began after the submarine did not report passing the next checkpoint.

"The Fleet command waited for this report for 24 hours," recalls Rear Admiral Valeriy Aleksin, a participant of those searches. "Everyone was hoping that the radio transmitters aboard the submarine might have malfunctioned or the insulation of transmitting antennas might have diminished, but there still were no reports. Then a Fleet alert was declared. The submarine aboard which I served at that time also put out into the ocean among the search and rescue forces. We put out first in a dense snowfall and a gale.

"On arriving in the area, four submarines were lined up at 10 nm intervals and we ironed the ocean that way for almost a month in a surface condition. The sea state was from 4 to 8, and it was impossible to make anything out and find anything on the seething water under such conditions. When the wind died down, American shore-based Orion ASW aircraft appeared above us. If we had had the very same kind of aircraft at that time it would have been possible to discover traces of the tragedy on the surface without difficulty.

"After four weeks of unsuccessful searches we returned to base, where the government commission already was waiting. At that time they named the most probable cause of the PL-574's loss to be her possible falling beyond maximum diving depth as a result of water entering the hull through an allegedly unserviceable float valve while snorkeling."

This was the official version, but not the only one. We will return to it again...

This secret just would have remained sealed had it not been for the Americans, who six years later decided to raise the PL-574 with [it's] ballistic missiles. The Americans searched for and raised the submarine in an atmosphere of extraordinary secrecy. The operation was called "Project Jennifer," and it began back in 1968 when, as the Americans asserted, the Soviet submarine was detected by a satellite on exiting the bay.

Several days after exiting, the submarine was fixed by hydrophones of "Sea Spider," the Pacific network of which stretches along the U.S. coast from Alaska to

California at a distance of more than 1,300 nm from shore and, additionally, at a radius of 1,300 nm around the Hawaiian Islands.

According to the version of Clyde Burleson, whose book is devoted to Project Jennifer, on that March evening the PL-574 was snorkelling and charging main batteries. A vent system malfunction led to an increased concentration of hydrogen in the battery room as well as the engine compartment. There was an explosion. The author asserts that the Americans arrived specifically at that conclusion after studying recordings of noises received by hydrophones in the U.S. Navy's Pacific center as well as after familiarizing themselves with the general arrangement of the submarine, which showed a vent system malfunction.

In the Americans' opinion, following the explosions the submarine began revolving and then headed to the bottom. She grounded at a depth of over 5 km.

This was the first USSR peacetime loss of a submarine which disappeared in an unknown location and for unknown reasons with the entire crew, writes Burleson. Since the Russians did not know the loss site, they had to investigate enormous ocean expanses. Fishing trawlers and special vessels departed several ports to seek the submarine which had disappeared.

In contrast to the USSR Navy, the U.S. Navy had information about PL-574. The place of the submarine's presumed loss was under constant observation from the air. The Americans were interested in whether or not the Soviets planned to conduct any kind of deep-sea work to extract the sunken submarine or not. By mid-May they noticed that the Russians had ceased around-the-clock searches, and then the American Navy began an independent operation. The deep-sea reconnaissance ship Mizar departed for the area where PL-574 had been lost, outfitted with the latest sonar equipment, gear for producing an underwater television image, and a system for magnetic sweeping and seabed exploration.

The Mizar arrived in the area at the end of June 1968 and began searches. Prior to this the vessel already had been used in searches for the sunken American submarines Thresher and Scorpion. Her crew was excellently trained.

Several weeks later the crew had succeeded in accomplishing the mission—determining the sunken submarine's coordinates "with an accuracy down to inches." Electronic photographs showed that the sunken submarine differed considerably from submarines of the basic "Golf" design. She had a conical tower to accommodate modern missiles.

Just what so drew the Americans? The fact is, they just were unable to raise their own sunken submarines Thresher and Scorpion...

"Our PL-574 attracted the Americans because in addition to missiles with nuclear warheads, aboard her were

electronic missile launch control instruments, the latest communications equipment, code and cipher tables, torpedoes and torpedo directors, not to mention the nuclear power plant and other important machinery," Admiral Sidorov believes.

Construction began on a special search and rescue vessel, the Glomar Explorer, under a secret contract with the firm of Glomar Marine Incorporated, which was part of American billionaire Howard Hughes' "outfit." Construction was carried out under the guise of building another vessel for prospecting for and harvesting minerals from deep-sea areas of the seabed (similar to the vessel Glomar Challenger previously built by the firm for this purpose—Author). Construction of "deep-sea barges" helping to raise objects from great depths was carried on together with construction of the Glomar Explorer.

The contract was concluded in April 1971. The CIA played the part of initiator and go-between in this matter. Hughes authorized his firm's use as a figurehead client, which alleviated many of the CIA's problems and above all easily explained the vessel's rather unusual appearance. Over \$200 million were allocated for the project.

(To be continued)

Sinking of Submarine K-129, Part II

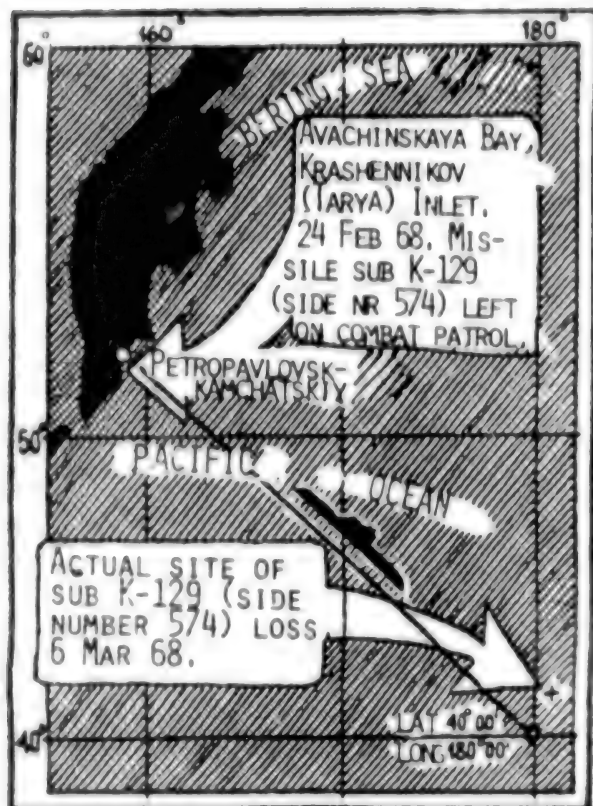
92UM1219C Moscow IZVESTIYA in Russian 7 Jul 92
Morning Edition p 6

[Part II of article by Nikolay Burbyga, IZVESTIYA, under rubric "IZVESTIYA Investigation": "The Submarine from 'Grave' Bay: The Glomar Explorer Raises PL-574"; see No 154 for Part I]

[Text] The Glomar Explorer was built in July 1973. Her displacement was 36,000 tons, length 188.38 m, beam 35.05 m. Six diesel engines with an overall output of 12,000 hp gave the vessel a speed of 12 knots as well as high maneuverability. Her technical outfitting consisted of an extensible crane and powerful winching device as well as a system of pumps. A gigantic well 60.6 m long and 22 m wide called the "Moon Pool" was provided in the vessel's midship section.

The Explorer put to sea on 4 July 1974. For several days she made laps through the area of the supposed loss of PL-574. Finally the site was determined and the Explorer began preparing the position.

Clyde Burleson recalls in his book: "There was also a Soviet trawler in this same area. The Russians began observing the actions of the Explorer. Then the Americans on the helicopter pad dropped their trousers in unison and mooned the trawler. Interest in the Explorer on the part of the Soviets immediately disappeared..."



Then here is what happened. The Americans began raising the submarine. The lift gear was operating successfully and the Glomar was about to begin lifting the submarine when the submarine broke up at a depth of 2,700 m. Only the forebody of the submarine was successfully lifted. The rest—conning tower, central control station, missile tubes as well as the power plant—again sank.

In late March 1975 announcements appeared in many newspapers (except Soviet, of course) that the U.S. CIA had succeeded in lifting PL-574 from the seabed in the summer of 1974 with the help of a specially designed vessel. Part of the submarine was lifted on 4 July 1974. The submarine was equipped with three ballistic missiles with nuclear warheads; in addition, according to unnamed official sources, there was evidence that torpedoes with nuclear warheads were aboard the submarine. It was also announced that several dozen corpses of Soviet submariners were found in the submarine's forward section that was raised and later were buried at sea with all military honors. They were covered with the Soviet naval ensign. The burial ceremony was conducted by American chaplains reading a funeral prayer in Russian and English. At this point flags were lowered to half-mast and national anthems of the United States and USSR were played. The ceremony was recorded on movie film and on a tape recorder in case this operation

should be declassified and the Russians should attempt to accuse the Americans of disrespect for the dead. As shown by experience, it was not for nothing that the Americans documented observance of the laws of their country.

The Glomar was at the position for a total of 40 days. In August 1974 the vessel departed for the island of Maui, where a large part of the crew was removed from the vessel and sent ashore on an excursion submarine with a glass bottom.

Soon 25 trucks carried away equipment removed from the Soviet PL-574 to Redwood City.

Just what could the Americans find in the submarine's forward section? In the opinion of Soviet experts, there could be torpedoes, sonar equipment and spare missiles in the forebody.

The Glomar Explorer returned to San Diego in the fall of 1974. It can be said that Project Jennifer, which cost the American taxpayers more than \$200 million, had been carried out brilliantly.

Possessing information that the Americans would raise our submarine, why did we gaze on all this from the sidelines?

Rear Admiral Anatoliy Shtyrov relates: "In this case the classic principle of acting as if nothing had happened functioned, as well as disbelief that such was possible, for PL-574 was lying at a depth of more than 5 km. In 1974 I directed attention to the appearance of a special 'Glomar Challenger'-Class vessel in the center of the North Pacific Ocean. The vessel's operating area coincided with the center of the search area for our PL-574. Just what could the Americans do in that area?

"I knew that the Glomar firm was using its vessels (nine were registered) for studying shelves and drilling the seabed on coastal continental slopes at depths on the order of 200 m, but these vessels did not operate in deep-water areas. I reported through channels, but the leadership brushed aside my suspicions. Then I prepared a chart of the area and a report at my own initiative. Chief Fleet Admiral N. Smirnov quickly delved into the crux of the matter and became agitated.

"Prepare the ships' Board specialists, fix the gear and head for the area.

"Several days later our fastest special ship departed for the area. She arrived and discovered a vessel of incomprehensible design the size of a soccer field. In the middle were trusses resembling oil derricks. Anchor chains and mooring buoys were not visible, but still the vessel was keeping station. That was all the information. Three days later the Glomar left the area and headed for the Hawaiian Islands.

"Later the Glomar again was DF'd in the initial area. The Fleet could not afford to send a large combatant ship to the center of the ocean under conditions of continuous storms. In early March Pacific Hydrographic Expedition

ships were in the southern part of the ocean for supporting the flight of cosmonauts. At our request one of those ships, the Chazhma, returned to the area and on discovering the Glomar Explorer, began shadowing her. At night when relative calm set in at the Fleet command post and communications were not loaded down, I went to the communicators and called up the commander of the Chazhma. I pumped information from him by bits and pieces. He confirmed that all signs were that the Americans were looking for oil. A week later he implored: stores on his vessel were giving out! Later I succeeded in dislodging the seagoing rescue tug MB-136 from the Fleet command. We placed sharp-eyed lads on her, but this of course would make you cry compared with the previous ships. What did they have? Binoculars, notebook... Ten days later the MB-136 also implored: there were just enough stores left only for the transit to Petropavlovsk. We began sending aircraft to the area during April-May. They would fly in, 'dab' at the horizon with radar and head back to the field. In July I could not bear it and requested time from the CinC Fleet for a special briefing.

"The Glomar Explorer is completing a preparatory cycle of work for lifting PL-574. The proof is that previously the Explorer operated in the firm's radio net, now she has shifted to secure channels. Give us a ship!"

"I have no extra ships," said the CinC, cutting me off.

"In general, I repeat, no one believed that the submarine could be raised. At the same time a very interesting piece of paper was lying in the CinC's safe (this became known later)

"Someone slipped a note under the door of the Soviet embassy in Washington: 'Certain special services are taking steps to raise the Soviet submarine which sank in the Pacific. A Well-Wisher.' USSR Ambassador to the United States A. Dobrynin transmitted the content of this note to Moscow in code

"On receiving the CinC's refusal, I decided to stake everything: I sent a report-query to the chief of my service on the Navy Main Staff. The answer came two days later: 'I direct your attention to more qualitative performance of scheduled tasks,' which, translated from bureaucratese meant 'Don't come around with your nonsense. Better do your job' ...

(To be continued)

CIS: REAR SERVICES, SUPPORT ISSUES

Volga-Urals MD Official on Preparations to Receive WGF Troops

92UM1253A Moscow KRASNAYA ZVEZDA in Russian
10 Jul 92 First edition p 2

[Interview with Lt Gen L. Mayorov, chief of staff of the Volga-Urals MD, by KRASNAYA ZVEZDA Correspondent, Lt Col O. Bedula: "From the Oder to the Volga"]

[Text] Moving by Russian railroads into the regions of the Volga and Urals are trains carrying servicemen, military equipment and the property of the units which until recently were part of the Western Group of Forces [WGF]. At present they have been incorporated in the Volga-Urals MD.

Our correspondent requested that the Chief of Staff of the Volga-Urals MD, Lt Gen L. Mayorov, describe how the problems of relocating the withdrawn units are being resolved.

[Mayorov] Such missions have been set for us right until 1994 and for this reason, with the completion, putting it figuratively, of the first stage which lasted 18 months, we have begun preparations on the second. Everything is subordinate to the forthcoming relocating of the serviceman families from the arriving units and to making certain that these units in the shortest time be able to begin carrying out their immediate tasks

[Bedula] How much has the acquired experience helped?

[Mayorov] We organized control from the arrival of the train to providing hundreds of people with everything necessary during the first days and weeks. But beyond that we had to work, as they say, from a blank script. While the first units to arrive in the district, and this was 18 months ago, have already been quartered in well-equipped compounds and have been given good training facilities, the current units are beginning everything almost from scratch. A tank formation drove its first stake into the tayga right next to a fox burrow. I think that the personnel will spend more than one week with axes, saws and picks in hand. But the enormous amount of work is not the main problem. The settling of the units could last an indefinite time, if the financing for the relocated units, the supplying of them with construction equipment and materials will remain on the current, unacceptably low level. There must be decisive help from the state

[Bedula] But certainly there exists an agreement that foreign firms will build compounds for the units being withdrawn, as they are doing in Byelarus and Ukraine.

[Mayorov] At one time the USSR Minister of Foreign Affairs E. Shevardnadze signed a document according to which Tank Division X would leave German territory by the end of 1993. Housing for this division would begin to be built by the foreign firm in March 1993. Even then it was clear that over one-half of the officer and warrant officer [praporshchik] families would end up without a roof over their heads. I can only term such an approach to carrying out a state task as a mockery of others

At present it is too late to call on the carpet those for whom a fine political gesture was more important than the moral principles and social protection of hundreds of families. We are preparing the people for the fact that until the compounds are built, they will have to crowd and squeeze in the little there is of reserve housing. All the in-any-way

suitable facilities we have adapted as temporary housing. Unfortunately, here we have experience.

[Bedula] But the housing problem could be at least partially solved by helping the officers and warrant officers with independent construction. The state has provided many benefits in this area.

[Mayorov] Yes, the state is assuming payment for one-half of the construction of an individual home of an officer or warrant officer. In Samara and Penza Oblasts, for example, this half will run to no more, no less than a million rubles. The second million, it seems, is to be invested by the serviceman. With our wages this is unrealistic. Individual construction, I think, will start when the government provides more substantial gratis aid and not only in money but also equipment and materials. Then there will be many who desire to live in cottages and private farmhouses.

[Bedula] In addition to the military compounds, there will also be a need for barracks, equipment storage and a mass of other facilities. Who will put these up?

[Mayorov] The military construction detachments in the district. They must carry out a truly colossal amount of work. We are hoping that the construction workers will receive the full amount of necessary material and technical support.

[Bedula] Are there any alternative methods for relocating the units?

[Mayorov] We must not only house the arriving troops and serviceman families, but also start measures to reduce and disband a certain number of units and subunits. The ideal approach would be to do this simultaneously. Otherwise while the tayga is being cut up for the new military compound, right next to it will be an empty finished one. Would it not be simpler to "settle" the withdrawn unit in an already inhabited garrison which meets all the requirements of service and everyday life?

But let us be realists. The tank regiment which arrived, for example, had "lost" 19 officers, including a regiment commander, as they had voiced a desire to serve in other regions of Russia and CIS countries. I anticipate that the formation will lose even more warrant officers. Here the

best approach would be to bring the units up to strength using officers and warrant officers from the subunits to be disbanded. They are old-timers and as a rule have their own housing. And from the number of apartments which the foreign firm is to build, some could be turned over to the garrison. In this instance, the state's expenditures would be much less and it would also take less time for relocation. We have already presented this proposal to the Russian Ministry of Defense.

[Bedula] Related to this, I have the following question: As far as the district is independent in resolving the problems of relocating the troops, do you not experience any dictating of terms from the Center?

[Mayorov] We work in close cooperation with the corresponding structures of the Russian Ministry of Defense. But the preliminary elaboration of any question is started by a group headed by the First Deputy District Commander, Lt Gen A. Shapovalov. It has been given broad powers. Suffice it to say that we have rejected certain proposals from the Center on the question of relocating units in the region for a number of reasons. Our refusal was sound and they agreed with us.

[Bedula] Some 18 months ago, certain rayons and oblasts protested against the locating of the subunits and units on their territory. I recall that things even reached the point of anti-Army actions. What has changed now?

[Mayorov] The Russian Government has adopted a number of decisions in the interests of the Army. But much more important is the fact that the relations lost between the military and civilians were restored in time. I am convinced that if tomorrow the necessity arose of moving troop contingents here from the Baltic, Transcaucasus or Moldova, they would be greeted with traditional welcome. In the local mass information media an argument even broke out over what oblast or what rayon would be the most hospitable, and who would better welcome and house the regiments returning from abroad. Behind this I see the rebirth of the historic tradition of a respectful attitude to the Russian soldier and to military service generally. In Samara and Chelyabinsk Oblasts, they immediately set up groups for cooperating with our representatives. Because of the full mutual understanding, we quickly can resolve all the questions.

INTERREGIONAL MILITARY ISSUES

Estonian Commissions Formed To Monitor Russian Military

92UN1755B Moscow NEZAVISIMAYA GAZETA in Russian 8 Jul 92 p 3

[Text] NEGA—The Estonian Government has formed two commissions to monitor the activities of Russian military units in the republic.

One is headed by Estonian Minister of Environment Tynis Kaasik. His commission will oversee the work and dismantling of nuclear installations on the territory of the Russian naval training camp in Paldiski and prepare reports for the world public.

In Kaasik's words, the reactors could be dismantled within two months. Only the removal of two nuclear waste storage facilities will present difficulties.

The second commission, headed by Minister of Health Andres Kork, was formed to oversee the legality of the transfer of property by departing Russian troops. In cases of the violation of Estonian laws, the commission will be empowered to turn the cases over to the procuracy for the subsequent return of the property to Estonia.

UKRAINE

Unit 51170 Appeal to Ukrainian President on Housing

92UM1239A Kiev NARODNAYA ARMIYA in Russian 25 Jun 92 p 3

[Text of appeal]

[Text] To the President of Ukraine, the Supreme Soviet of Ukraine, the Ministry of Defense of Ukraine, the Chairman of the Committee on Issues of Social Protection for Servicemen of the Cabinet of Ministers of Ukraine, and the Editors of the Newspaper NARODNAYA ARMIYA:

The servicemen of Military Unit 51170, stationed in the city of Kremenchug, appeal to you. We earnestly ask that you visit us and investigate on the scene the critical situation that has arisen in the provision of housing for the families of servicemen in the unit. No apartments have been allocated since 1988, with the exception of one for the deputy commanders of the unit. The line to receive housing has increased to 140 people as a result, which is about 80 percent of the officers and warrant officers (including the Afghan and Chernobyl veterans with preferential treatment—more than 30 of them). We direct your attention to the fact that the unit has no dormitory, and 140 people are thus constantly forced to find housing independently under conditions of fantastic price increases. We have to pay an average of 1,500 coupons a month, with a pay level of 3,000-4,000 and

non-working wives who are forced to sit with the children. The problem of placement for the wives and children is directly dependent on the sufficiency of housing, since in taking one apartment after another and moving from one end of the city to the other, it is very difficult to hold onto a job and bring children to one kindergarten or school.

Officers and warrant officers without housing and not needed by anyone, periodically receiving a rejection from apartment owners, are forced to rush around searching for new housing over and over. They have to undergo all sorts of humiliations and disappointments therein. The city authorities have told us honestly and candidly that we are burdening them, that they should not be occupied with our problems, referring to the fact that the Supreme Soviet of Ukraine has not yet approved the budget and has not provided any money for the construction of our apartments. We met in February with the chairman of the ispolkom, M.K. Ponomarenko, who promised us a great deal and reported that he was very troubled by our problems. It turned out in reality, however, that the leader did not lift a finger to allocate even one apartment.

Some two million rubles were allocated in the past, in 1991, for the dedicated purpose of building housing for the unit. But there are no apartments, and where the money went remains a riddle.

We earnestly ask once again, based on all of the aforementioned, that you investigate on the scene or give us a concrete answer—are we needed by anybody and will we be provided with housing? For how long will we, our wives and our children be considered second-class people?

The officers and warrant officers of unit 51170: Majors Ocheretnyy and Yudenkov, Lieutenant Zhirnov, Captains Sichevov and Stetsvuk, Senior Warrant Officer Gavrilovskiy and Warrant Officer Kumevko, among others

A total of 54 signatures in all

* The overall number of families of servicemen without apartments on 1 Jan 92 was about 80,000.

* The cost of a three-room apartment today is more than 350,000.

Lt-Gen Vasilyev on Creating Effective Ukrainian Air Force

92UM1230A Kiev NARODNAYA ARMIYA in Russian 2 Jun 92 p 1

[Interview with Lt Gen Avn Valeriy Vasilyev, commander of the Ukrainian Air Forces, by Lt Col Nikifor Lisitsa: "The Aviators Have Made the Choice of Serving the People of Ukraine"]

[Text] [Lisitsa] Comrade Commander, you have been in your new position for just a few weeks. But you have been acquainted with the air grouping stationed here on the

republic's territory for some time serving both in the Odessa Military District and here in Vinnitsa. How would you characterize the state of affairs in the units and formations?

[Vasilyev] First of all, I would like to point out that in the tactical aviation units over 90 percent of the servicemen and primarily the officers have taken the oath of loyalty to the Ukrainian people. In the military transport aviation, their number is over 80 percent. This gives one the right to judge that the Air Forces personnel have accepted and supported the Act of Ukrainian Independence and the Appeal of the Ukrainian President Leonid Makarovich Kravchuk to the Servicemen, and they have voluntarily made their choice of serving the people of Ukraine and to aid them in building up the young independent state.

Undoubtedly, the recent events after the collapse of the former Union, the economic crisis and other negative phenomena of our times have been felt both in the Ukrainian Army as a whole and in its Air Forces. I would even say that aviation, as the technically most equipped Armed Service, has felt all these phenomena more acutely. Above all in the logistic support for the combat training of flight personnel. Difficulties have arisen with the deliveries of fuel, spare parts, aviation engines and repair facilities. And here we must emphasize that this is not directly linked to Ukraine's proclamation of its independence or to the difficulties in relations with Russia, as some have endeavored to stress. The reasons lie in the disrupting of economic ties between the enterprises and in the decline of production. But everyone suffers from this. In knowing the situation in the other regions of the former Union, I can say that things are no better there. All the aviation formations have ended up in such a situation, with the sole difference that in some places the situation is a bit better and in some worse. As a whole the level of combat readiness and the maintenance of the aviation equipment is approximately the same.

In proceeding from the arising situation with supply, we consciously somewhat reduced the intensity of flight personnel training and the number of flights. This was done also considering the change in the international political situation and the lessening of military confrontation. Such an approach has made it possible to maintain resources and material supplies. But all this has been done within reasonable limits in order not to reduce pilot training and combat readiness as a whole.

[Lisitsa] Valeriy Afanasyevich [Vasilyev] Since the question of difficulties has come up, we would like to learn what other problems are arising now or confront the aviators?

[Vasilyev] First of all, I would like to separate out the personnel question. Although the problem is resolvable, we must not close our eyes to it. In our work we have been and are guided by the legislative enactments and by the orders of the Ukrainian minister of defense, and for

this reason the process of taking the oath of loyalty to the Ukrainian people has been carried out conscientiously, with the right of each aviator to choose his further fate. Quite naturally, certain commanders of units and subunits as well as specialists stated their desire to return to their own homeland, to the other CIS states. This is their civil right and we are not preventing anyone from making his own choice. But vacancies have also appeared, particularly in the position of squadron commanders. This is a rather important link in the chain of command as is confirmed by the experience of many wars. The squadron commander is the chief organizer of air combat. He is the leader in the collective and the trainer of subordinates. For this reason, such positions must be filled by specially chosen persons. We are now doing this. Here we are employing two approaches. We are promoting young capable flyers. As for those officers who have voiced a desire to serve in their own homeland, the mechanism for their replacement is being set up and ties are being established with the appropriate bodies. In truth, this process has been somewhat drawn out. But I feel that with the training of the young flyers, there will be no problems. There are aviation schools on the territory of our state. With a slight restructuring, they will be able to train our own national personnel of aviators for all types of the aircraft which we now have.

The questions of the sociodomic and particularly apartment support for the aviators are acute. But those legislative enactments which Parliament has passed on the social protection of servicemen instill confidence and the hope of their successful resolution.

[Lisitsa] We have already spoken of the air grouping on the territory of Ukraine. But this still is not the Air Forces of a sovereign state. What, in your view, are the most important changes which must be carried out in order to establish a unified, well controlled military organism?

[Vasilyev] In replying to this question, I would like first of all to stress some well known truths, because some persons have tried to forget them. Yes, Ukraine has proclaimed that it is a nonaligned state, it will not maintain, produce and employ nuclear weapons and that it does not see any neighboring state as its potential enemy. We are being guided by this. But the military should not fall into the euphoria of pacifism. Our task is to maintain combat readiness on the level which the situation requires.

A state is strong in its economic, spiritual and cultural potential, in its unity and solidarity. But a state should also be able to defend itself. For this Armed Forces are required as they can ensure such a possibility. "Toy soldiers" will not do for this.

From the experience of the Great Patriotic War and the local wars, particularly of the last period, we can see the particular role and place of aviation. If one looks not only at the most developed countries of the world, but also at the nations of the Asian and African continents, we will note that they all have the most modern military

aviation equipped with effective arms and high-precision weapons. This is in order, if so required, and this was demonstrated by the war in the Persian Gulf, to launch devastating strikes from the air and achieve the aims of the war. At present the opinion is often forced on one that it is enough to set up a powerful air defense system, to maintain and develop the fighter aviation, and in this manner it is possible to carry out all tasks. As for the bomber and ground attack aviation, they can be dispensed with. Here they refer to the defensive doctrine. But certainly a defensive operation cannot be carried out without the means of air attack. It is impossible to halt an armed grouping, to check its invasion and defeat the enemy reserves without powerful bombing and ground attack strikes. This was confirmed by combat experience, including in Afghanistan. I happened to participate in these actions and was personally convinced how important is air support even in battles with small armed groups. For this reason, in taking advantage of the moment, I would like to appeal to the Ukrainian Supreme Council, the President, the Cabinet of Ministers and the minister of defense with a request to be more solicitous toward the Air Forces during the period of their reorganization and creation.

There still is rather a lot of work in changing the structures. But we will carry this out in stages in order not to reduce the combat potential of the air grouping. We must reduce the headquarters structures with the eliminating of the divisional element.

In the first stage which has already started, the Air Forces headquarters body is to be established and this will be based on the staff of the air army stationed in Vinnitsa. There will also be a small cutback in the number of air units. In addition, four groups of operational headquarters will be set up: on the Western Sector with headquarters in Lvov, on the Southwestern in Odessa and in addition, headquarters groups for the military transport aviation as well as a reserve and personnel training.

[Lisitsa] How significant will the cutbacks be?

[Vasilyev] During the period of the first and second stages, the reduction will be insignificant. And it will be carried out at the expense of officers who have served their designated time. I want to stress particularly that the directive, given by the Supreme Council and the President on discharging only the servicemen who have a right to a pension and are provided with housing, will be carried out unswervingly.

Subsequently—from 1995 to 1999—there will be deeper cuts and again in the headquarters structures, the support subunits and the storage facilities. The reduction will involve the air regiments on a minimum basis. But we shall also endeavor to proceed by dismissal upon number of years served, because of illness or some circumstances in personal life. In reducing the numbers admitted to military schools, this process can also be carried out less painfully for the officers.

[Lisitsa] During a recent trip to one of the well-known aviation regiments, I happened to hear disquieting statements: after the reorganization will the units be able to keep their honorific designators, awards or at least the right to inherit their combat history and traditions? It was proposed that they work out and legitimize an emblem for each air regiment, as has been done in certain foreign armies. What is your opinion of this? And when will the state emblem of Ukraine appear on the military aircraft?

[Vasilyev] I feel that we should not forget our history. What did the victory alone in the Great Patriotic War cost? The military aviators made a worthy contribution to it. It would be immoral to forget the feats of our flyers. We should honor and remember these people and educate the youth in their example. For this reason, I propose that the honorific designations of the glorious regiments must be kept. Moreover at present they are discussing the question of leaving the guards designators and the colors with combat decorations.

We know that in many countries the aviation units have their own distinct emblems. I feel that we could introduce our own emblems in the Ukrainian Air Forces. But this must be done reasonably. We must review the various proposals on a competitive basis, select the most appropriate, discuss these as sessions of a special commission and submit them for approval.

I think that the state ensignia will soon be introduced on the aircraft of the Ukrainian Air Forces. There is already an order of the minister of defense on working out the corresponding distinguishing signs. As soon as these are approved by a legislative enactment, we shall apply them to our aircraft.

As of now the emblem can be found only on those aircraft which will participate in an air show in the U.S. and Canada.

[Lisitsa] If you could, please give us a bit more detail about this.

[Vasilyev] Upon the invitation of the Ukrainian diaspora in the U.S. and Canada, a group of our pilots is to perform demonstration flights over a period of 6 months in MiG-29 aircraft. This is a new mission for us and we should approach it responsibly. We have entrusted the execution of the flights to the most experienced pilots such as Koval, Golovan, Levchuk and Soloshenko. They have undergone the corresponding competitive selection checks and I feel that they will meet the set task. On their wings they will carry the state flag of Ukraine throughout North America, demonstrating their high flight skills.

[Lisitsa] Valeriy Afanasyevich, in concluding our conversation, a question: from what did you begin your work in the new position? What is your credo in working with the personnel?

[Vasilyev] The experience of serving in aviation has taught me to value in subordinates primarily high professional skills, flying mastery, dedication to the job,

firmness in the held position and the ability to defend it, a capacity for work and dedication. If a person is committed and gains satisfaction from his work, he can carry out the most difficult tasks.

Officer Union Declaration Supports Morozov

92UM1276A Kiev NARODNAYA ARMIYA
in Ukrainian 8 Jul 92 p 1

[Declaration by the Ukrainian Officers Union: "Regarding the Government Crisis in Ukraine"]

[Text] In connection with the government crisis in Ukraine, as well as the evident demarche by the Cabinet of Ministers at the recent sitting of the Supreme Council, the SOU [Ukrainian Officers Union] hereby declares that it is impossible for the government to decide any practical matter with regard to any rank without bringing it up before the Ministry of Defense.

At the present-day stage of building up the Armed Forces of our sovereign state of Ukraine we need—as never before—to accord gravity and consistency in adopting decisions and undertaking deeds.

The stance adopted by Colonel General Kostantyn Morozov, Ukrainian Minister of Defense, and his refusal to take part in the demarche engaged in by the Cabinet of Ministers are hereby evaluated by the SOU as a manifestation of the Minister of Defense's high level of responsibility for the tasks and the cause entrusted to him.

The SOU positively evaluates the acts undertaken by Colonel General Morozov directed at further building up Ukraine's Armed Forces at this vitally important time; it expresses its confidence in him and its support for him.

We call upon all service personnel in Ukraine's Armed Forces to rigorously carry out their service obligations and duties, to manifest a high level of civic responsibility, and to direct all their actions at strengthening and reinforcing the defensive capabilities of our young state.

Glory to Ukraine!

[Signed] Executive Secretariat, Ukrainian Officers Union

Main Task of Officers' Union Defined

92UM1276B Kiev NARODNAYA ARMIYA
in Ukrainian 8 Jul 92 p 1

[Report: "In the Ukrainian Officers Union: Coordinating Council Created"]

[Text] In accordance with the decisions taken at the Third Congress of the Ukrainian Officers Union, the Constituent Conference of the representatives from the SOU [Ukrainian Officers Union], from all subdivisions of the Ministry of Defense, and the Chief of Staff took

place on 4 July 1992 in the city of Kiev. This conference created a SOU Coordinating Council for the Ukraine's Armed Forces.

Colonel Vitali Illich Lazorkin was elected chief of the Coordinating Council.

The principal task assigned to the Coordinating Council is to integrate the efforts of all the SOU centers and their military personnel for the purpose of building up Ukraine's Armed Forces.

[Signed] Secretariat of the Coordinating Council

Right to Military Service Based on Citizenship Not Nationality

92UM1230B Kiev NARODNAYA ARMIYA in Russian
2 Jun 92 p 3

[Article by Lt Col P. Nedzelskiy: "The Right To Serve Comes From Citizenship Not Nationality: On the Question of Certain Insinuations in the Mass Information Media on the Personnel Policy in the Ukrainian Armed Forces"]

[Text] What caused me to write to the editors of NARODNAYA ARMIYA was the article by Col Ivashchenko, "We Were Terribly Deceived In Being Forced to Take the Oath of Loyalty to Ukraine" (KRASNAYA ZVEZDA, 22 May 92).

I will not conceal it, but the article profoundly disturbed not only me. Only the title of the article is worth something.

As the chief of the Personnel Department of the Sociopsychological Directorate of the Ukrainian Ministry of Defense, I will endeavor to answer in a way so as not to provide Col Ivashchenko with grounds for considering my article as "defamation and lies," as he said about this in advance.

I will immediately raise doubt, Mr. Colonel, over your assertion that you were "terribly deceived" and that you were "forced" to swear to Ukraine. It is hard for me to imagine that someone could deceive an officer who obtained the rank of colonel ahead of time, or simply an adult and force him to commit in his life such a significant action as taking an oath of loyalty to a people and state. You complain that you did not even have time to give some thought to the taking of the oath. Here I cannot agree with you, since as early as 24 August in 1991, the Ukrainian Supreme Council approved a decree establishing Ukraine's own Armed Forces and putting under Ukrainian jurisdiction all the troops stationed on its territory. Were almost 5 months not enough for you, Colonel, to give some thought, to weigh out everything and draw certain conclusions about what was happening?

In terms of the "terrible deception," let me give a typical example for Ukraine. At the Kharkov Tank School, some 350 soldiers and officer candidates refused to take the

oath. At the same time there were just two officers who refused to take the oath (!). Do you mean to say, Mr. Colonel, that the officers are more stupid than the soldiers and officer candidates and that it is easier to deceive them? Let's not try to be sly, Mr. Colonel! You know perfectly well that the soldiers and officer candidates who did not take the oath of loyalty to the Ukrainian people were sent under the established rules to serve and study in their own republic. But the soldier and the officer candidate hold only minor positions, they have no property, only personal effects. For an officer, and particularly for such as a colonel, the situation is different. Without taking the oath to Ukraine, he is confronted with the problem of moving to another state in the army of which he would want to serve. Many have their own apartments in Ukraine. Would they quickly secure housing in the new place? If there is a dacha and a garage, if the wife has a good job, if the officer's position here is such that, with the current ubiquitous cutback, he would scarcely obtain at the new place even in Russia? So, such officers take the oath of loyalty to the Ukrainian people under the pressure of these circumstances, protesting in their hearts those changes which are occurring in Ukraine.

Let me give one other example of a colonel from the Kharkov Missile School (I shall not give his name) and who on the day of taking the oath at 1200 hours publically stated that "he would not swear loyalty to the blue and yellow rag," and at 1500 hours had already taken the oath. Is it possible that during these 3 hours someone had been able to "terribly deceive" him? This colonel, incidentally, is still serving in his former position.

Undoubtedly there is a category of officers who have not understood the essence of the political changes occurring in the states which were former USSR republics. They have not understood the essence of those circumstances which rest on them as citizens of the new states and not the former USSR. Possibly they feel that all these changes are of a formal nature. That everything within remains as before behind the changing of the external names of entire states. Here they are primarily to blame for this confusion.

You, Mr. Colonel, before taking the oath of loyalty to Ukraine had already taken the first step on the path to this. You voluntarily accepted Ukrainian citizenship. In a majority of the states in the world (including Ukraine) only the citizens of these states can serve in the armies of these states. But in world practice there is also the following: in order to be a citizen of one or another state, it is essential to know, as a minimum, the official language and have lived at least a minimum stipulated time in this state. In the world this time varies from 5 to 20 years. For example, Latvia has passed a law where this period has been set at 16 years, plus the obligatory knowledge of the official Latvian language. If Ukraine had set out on the generally-accepted path in world practice of a compulsory knowledge of the official language and a minimum required time of residence in the territory of the state, then, I feel, you will agree with me,

at least 90 percent of the present citizens of non-Ukrainian origin, including the officers, would not receive the right to be citizens of Ukraine and primarily due to an ignorance of the language. For the officers, this would mean the loss of the right to serve in the Ukrainian Army. But the Ukrainian leadership took an unprecedented decision in world practice and according to which all inhabitants of Ukraine, upon their request, instantly became Ukrainian citizens, the so-called "zero version." I would point out that in the U.S. a person applying for citizenship can be asked what possibly in your opinion are provocative questions. For example, the number and names of the states in the U.S.; the names of presidents; they can be asked the words of the American national anthem. But no one, Mr. Colonel, has asked you anything and has not forced you to sing "Ukraine Will Not Die." They have not even required of you a knowledge of the Ukrainian language in order to become a citizen of Ukraine. Clearly such an externally formal and, in my opinion, hypertrophied democratic decision by the Ukrainian leadership of the citizenship question as a "zero version," would allow you to hope that the oath of loyalty to Ukraine would be just as formal. That in the troops everything would remain as before and that the organizational development and leadership of the Ukrainian Armed Forces would, as before, be carried out from Moscow. You were terribly deceived, Mr. Colonel, feeling that the army in Ukraine would be a puppet, pro-Moscow one. You have seen that the Ukrainian military leadership has set out on the firm course of an organizational development of the Ukrainian Armed Forces which is independent from Moscow, with an unconditional orientation to national traditions and to the historical experience of the Ukrainian troops. Incidentally, history tells us that during the years of World War II, in the Soviet Army there were eight (!) Ukrainian marshals. On the other hand in postwar times there has not been a single Ukrainian commander of a district or army. At the same time Ukrainian officers were 40 percent in the Soviet Army while for some reason 85 percent of the officers from other nationalities served in Ukraine. For example, in the Northern Fleet, 60 percent of the officers are Ukrainians. In the Black Sea Fleet, not more than 30 percent. In the leadership of the Air Forces of the Black Sea Fleet there is not a single Ukrainian, as is the case, incidentally, in the leadership of personnel.

What "ism" would you apply to this, Mr. Colonel?

You would frighten us with nationalism, even without having any understanding of the true meaning of this word.

I would inform you that even the ideologists of communism were recently forced to arrive at the generally-accepted, civilized understanding of the words "nation" and "national." Here is a quote from the journal KOMMUNIST (No 1, 1989, p 50): "In world political literature and international law practice, these terms are accepted and designate the aggregate of citizens of one

state." I am not surprised that you were confused in the true understanding of the words "nation" and "state." Even the deputies from the Ukrainian Supreme Council sometimes waste time arguing over what is correct in the laws that they are passing, "Ukrainian people" or "the people of Ukraine," without suspecting that these are the same in world practice.

As well in world practice the concept of "nationalism" is a synonym for the concept "patriotism." The English sociology professor Miller interprets nationalism as a higher form of patriotism. Even Lenin divided the concept of "nationalism" into two: "the nationalism of the suppressor nation" and the "nationalism of the suppressed nation." If one considers that the Russian thinkers called Russia the "prison of peoples" which held over 100 nations and nationalities in slavery, then inherent to this is nationalism of the suppressor nation, that is, great-power chauvinism. Most applicable to Ukraine is the nationalism of the suppressed nation as for almost 350 years it was a colony of Russia. From history it is known that Lenin at first supported the "nationalism of the suppressed nations," since the national liberation movements would accelerate the downfall of the Tsarist Russian Empire. But as soon as Tsarism had fallen in the Russian Empire, Lenin abruptly altered his attitude to the nationalism of the suppressed nations, as this was now directed at the collapse of the new, communist empire. Since that time Lenin began to say that the proletariat did not have a motherland and that its motherland was the entire world and it should take it into its own hands. The concepts of "motherland" and "patriotism," that is, "nationalism," are all concoctions of the bourgeoisie. And so for more than 70 years, the communist ideologists have invested only a negative sense into the concept of "nationalism." Incidentally have you not wondered how it is possible to be an internationalist without being a nationalist? If a person is "no one," then an "inter-no one" is also "no one." It is hard to imagine that a person who does not respect his Russian or Ukrainian mother would be capable of respecting a foreign Georgian or Ossetian mother.

You, Mr. Colonel, have become the victim of an incorrect, in the Bolshevik manner, uncivilized interpretation of the concept of nationalism. For this reason, in saying that Ukraine "has been infected with the virus of nationalism," you should be aware that according to the concepts generally accepted in the world, you are asserting that Ukraine has been infected with the "virus of patriotism." But is patriotism a disease? This is the normal state of a nation. But great-power chauvinism is a serious illness. (The word "chauvinism" derives from the name of a French officer whom Napoleon promoted early—like you—to the rank of colonel for his theory on the superiority of the French nation over others.) Here is where your anger should be directed at the great-power chauvinism, at the imperial thinking which exists, unfortunately, in the Russian leadership. This can be seen from the fact that at the recently held talks between the

Russian and Ukrainian leadership over the Crimea question, one of the representatives of the Russian side stated that if Ukraine had been more obedient, then the problem of Crimea simply would not have existed. It turns out that for its "disobedience" to its "elder brother," Ukraine is to pay with the explosive situation in Crimea which is fraught with bloodshed. Something similar was mentioned by the Georgian President Gamsakhurdia: how the USSR President Gorbachev threatened him for disobedience due to complications in North Ossetia.

These are typical examples of imperial thinking with all the ensuing consequences. But why are you silent?

Now I shall give data which show how things are with the nationality question in the Ukrainian Armed Forces.

The Commander of the Ukrainian Air Forces, Lt Gen V.A. Vasilyev, is a Byelorussian by nationality; the Air Defense Commander, Lt Gen M.A. Lopatkin, is Byelorussian; the Commander of the Army, Maj Gen V.N. Shekhovtsev, is Russian; the Deputy Commander of the Odessa Military District, Lt Gen Yu.K. Kuznetsov, is Russian; the Chief of Staff of the Carpathian Military District, Lt Gen G.N. Gurin, is Russian; the Deputy Commander of the Army, Maj Gen O.M. Khodin, is a Russian; the divisional commanders Maj Gen V.A. Chernykh is Russian, Maj Gen Ye.A. Gorbylev is Russian, Maj Gen Ya.Ya. Tasoyev is Ossetian, Col Ye.A. Chetverov is Russian. This list could be continued, but I will end it with two names: the Ukrainian Minister of Defense Col Gen K.P. Morozov is Russian and the acting Chief of the Main Staff, Lt Gen G.V. Zhivitsa, is Russian. As they say, there is no need to comment. The main posts in the Ukrainian military leadership are held by Russians. What the nationality of their wives is I do not know and do not want to know.

But you, Mr. Colonel, assert that such provocative questions are heard in the certification commissions in the Ukrainian MO [Ministry of Defense]. This is surprising to hear from you, since you yourself were not on a certification commission and you have not even been to the Ukrainian MO. It turns out that you are using the words of others. This is not ethical, not least to publish something but even to say this out loud. I assert, Mr. Colonel, that you have become the victim of an intentional lie. Moreover, you yourself are disseminating this false information, the extreme lethality of which is obvious in this complicated historical period.

The whole question is why you are doing this? Why spread a lie, a miscomprehension and even hostility between our peoples, the Russian and Ukrainian?

Let us recall from history that England and France fought hundred-year wars. For a century the French upon going to bed, used to pray: "God! Punish England!" But look what civilized, friendly relations exist now between England and France. Russia and Ukraine have many more historical bases than England and France with their constant wars, to establish civilized relations

in the future. But such articles as yours, Mr. Colonel, merely defer the moment and sow suspicion, spite and even hostility.

Again I must ask you why you are doing this? Into whose hands does this play? Might you not be trying by so doing to win political dividends from the Russian military leadership, like your colleague pilots who took six military aircraft from Ukraine back to Russia and received positions from Mar Shaposhnikov? At the same time that Russia for 5 months now has been unable to take back the 9,000 officers who have refused to take the oath of loyalty to Ukraine and have wished to serve in Russia.

As for the Ukrainian Officers Union (SOU) which I was instrumental in founding, I want to assure you that this is not a political organization, as it does not pursue political goals; it is not guided by any political party and hence cannot replace the former political bodies in the army. One of the tasks of the SOU is to restore among our officers the noble spirit of the officer class and which is given equally high esteem and praise in all the armies of all the countries of the world. To restore relations in the army on democratic principles. It is not up to you, Colonel, to explain that in the Soviet Army, such a collective body as the officer assembly has completely discredited itself and has become a faceless, obedient rudimentary appendage of the political department. The SOU is an organization where they tell the truth about an officer. This truth may not be to the liking of only that officer who has defamed himself with ignoble deeds, an officer who is disorderly, dishonest and in terms of moral and professional qualities does not correspond to the position held.

For precisely this reason the Personnel Directorate of the Ukrainian MO considers the characteristics and recommendations of the SOU provided about the officers. The question arises, Mr. Colonel, as to why you do not like such a progressive officer organization with noble goals and which has proven itself as an implacable fighter for democratic changes in the army and is permitted by Ukrainian legislation?

Lastly, you write with certainty that in the future it will be difficult for you and your family, and hence you assign yourself the role of almost political refugees. Allow me to briefly describe my own case.

In April 1990, in Kharkov I was the initiator of convening the first organization in recent years in Ukraine for Ukrainian officers (this also included Russians). This organization scientifically, on a historical and state legal basis, examined the necessity of establishing the Ukrainian Armed Forces, it worked out a plan for their organizational development and made the demand of founding the Ukrainian Armed Forces by parliamentary methods. I was called to Moscow for "brainwashing," and here I was told that the Chief of the Political Directorate of the Russian Forces, Col Gen Rodin, had stated "Nedzelskiy must be fired." Having the best recommendations and certification, in October 1990, I

was discharged by Yazov from the Army. An article would not provide enough space to describe the persecution and threats which befell me and my family. I will merely say that in the summer of 1990, we were visited by the correspondent of THE NEW YORK TIMES, the famous Bill Keller. He asked me the question of what was the attitude of our colleagues, the Russian officers, to me and our organization. I replied that a predominant majority showed understanding. But there were also those such as, for example, Capt Vasilevskiy, who openly stated "Give me a hundred soldiers and napalm and I will bring you, Ukrainians, to order." He boasted of the fame of his name and his Moscow connections. "In Moscow I have an apartment of 102 sq. meters, a dacha in Peredelkino, and my father has a black Volga." But since Vasilevskiy's mother-in-law lived in Kharkov, he chose Kharkov as his place of service. Also acting as Great Russian chauvinists were Col Volkov and Lt Col Kovalev, and Lt Col Trofimenko, Col Milovidov, the military procurator at the Kharkov Garrison, and to whom I turned over the question of my persecution by superiors, frankly told me that if he were my superior he would exile me from Ukraine behind the Urals and that if it were now 1937, I would not be sitting in his office but would have already been executed. Or here are the words of Gen Norenko who is serving now in Kazakhstan but which were said to an Ukrainian officer: "For Soviet society, it would not be a great loss if such a language as Ukrainian were to disappear as well as such a nation as the Ukrainians."

I do not want my great, much-suffering people to disappear. But for this, it is essential that the patriot officers of my people be responsible for its peace and tranquility.

You ask what happened to the above-named officers? Nothing. They took the oath to Ukraine and as before are serving in their old places. No one is persecuting or plans to persecute them or their families. Their only judge is their own conscience. But in order for this court to be held, a main condition is essential and that is that a person have a conscience.

I have the honor.

Proposal for Training Chemical Troops Officers

92U MI241B Kiev NARODNAYA ARMIYA in Russian
24 Jun 92 p.3

[Article by Colonel Aleksey Blekot, candidate of military sciences, associate professor, PVO [Air Defense] Radio-technical Academy imeni L.A. Govorov Military Engineering Department chief, under the rubric: "Reform of the Ukrainian Armed Forces": "Chemical or Ecological?"]

[Text] Under conditions of the impending significant reduction of the Ukrainian Armed Forces, it would obviously be premature to reject training specialists of the chemical military occupational specialties. However, a new conceptual approach is needed during the organization of the training of these specialists in Ukraine.

result of the excessive secrecy among many sergeants, including officers, the perception of chemical specialists is associated with the concept of "smoke," "gas" and "gas mask." Yes, there certainly are gas masks and obviously they will be retained in the inventory of all Ukrainian Armed Forces personnel for a long time yet. But recently many modern measuring instruments, complex electrical devices, and electronic calculators have appeared in the inventory of the chemical troops.

The scope of the tasks assigned to the chemical troops has expanded. At the stage of the creation of these troops, gas defense was the main task and smoke screening was secondary. Later, a series of tasks subsequently appeared that were associated with the detection and elimination of the aftermath of the use of nuclear weapons. Right now the chemical troops, jointly with the civil defense agencies, are being involved with carrying out the elimination of the effects of accidents (destruction) at potentially hazardous facilities, that is, they are participating in the normalization of the ecological situation.

Years of military practice and participation in exercises that are not associated with their primary basic training have demonstrated that right now chemical specialists, even commanders of the lowest elements, must have broad and deep engineering knowledge, both theoretical and practical. An orientation only toward face knowledge of the combat properties of radioactive and toxic substances has resulted in the unwariness and contamination of subordinate personnel.

Today ecological problems have been urgently placed on the agenda. Accidents and destruction at industrial enterprises, on nuclear submarines and at AESs (atomic power plants), at oil fields and at fuel pipelines resulting in significant changes of the ecological situation and that is affecting the safety of the troops.

It would seem that these factors should result in a change in the sphere of military ecology. However, so far the positions of inspectors for the protection of the environment (military ecologists), as a rule, are not filled in the troops. Consequently, unqualified personnel are primarily in these positions. Proposals for the normalization of the training of military ecologists have been expressed on the pages of NARODNAYA ARMIYA. But these proposals have been based on a narrow profile.

It is difficult to utilize the rich experience of the chemical troops in the elimination of the aftermath of the accident at ChAES [Chernobyl Nuclear Power Plant] in emergency situations at potentially hazardous facilities, and their special training and existing men and equipment for the organization of training, both in the chemical troops specialty and in the military-ecological specialty.

Military experience indicates that we need to lay the basic principles at the foundation of the chemical training system:

- a review of basic general scientific and general engineering training;
- the specific nature of the services and branches of the armed forces and National Guard and Civil Defense forces; and,
- comprehensive training of specialists on troop protection and on the issues of the ecological safety of the troops.

We need to answer a primary question with the realization of the first principle. What general scientific and general engineering knowledge can we consider basic when training the required specialists? It is difficult to unambiguously answer that question.

If we proceed from the traditional name of the specialty, the deviation must be toward the chemical disciplines (inorganic, organic, physical, colloidal, and analytic chemistries). But if we view the practical aspect, we must first of all study nuclear physics, electrical engineering, and electronics—since these are the subjects in which graduates of single specialty VVUZs [military higher educational institutions] and the chemical defense academy experience difficulties.

In our view, there must be a weighty approach here that combines both of these directions.

While considering the perspective of the development of weapons on new physical principles and the reduction of the threat of the use of chemical weapons, we must take the disciplines that are basic for radiotechnical and electronic specialties for general engineering and general scientific training, having significantly reduced the study time of the general scientific chemical disciplines. Here breaking up the stereotypes that have developed in our consciousness will be the main obstacle.

Two paths are seen to realize this principle. The first is the allocation of training of all specialties in VVUZs throughout the services of the Ukrainian Armed Forces and second—this is the concentration of training of students according to individual specialties at one of the VVUZs, better if it is at an inter-service school. Naturally in the first case, training of specialists for some service of the Armed Forces or other will be adjusted to a greater extent than in the second. However, unity of the basic training of students is attained in the second case. The specific nature of the services may be considered at the concluding phase of training (at an Armed Forces service or branch of troops specialization training center).

In the article "Chitoby gotovit professionalov" [In Order To Train Professionals] (NARODNAYA ARMIYA, 5 March 1992), the head of a respected school proposes training specialists, including "chemical specialists," based on Kiev VOKU [Higher Joint Command School].

But if we take the proposed concept of basic general scientific and general engineering disciplines as a foundation, then, obviously training troop protection specialists based on Kharkov Garrison VVUZs is the optimal variation.

Simple calculations indicate that we have both the required high class military professors, the training facilities, and the special range at garrison VVUZs to do this. We just need several professors of general scientific and general engineering disciplines whom we can easily find at Kharkov's reduced institutes.

Incidentally, on the name of the specialty. The scornful "khimik" [chemical troop] has long since become obsolete because it does not correspond to the content of the work being carried out. In the armies of the United States, Germany, and other states, similar specialties are called "Nuclear, Chemical and Biological Defense." In the Ukrainian Armed Forces, we can call this specialty "Protection of Troops from Unfavorable Factors" [Zashchita voysk ot neblagopriyatnykh faktorov]. The proposed name of the specialty will completely correspond to the content of the skilled characteristics and consider the aspects of ecological safety of the troops.

For the Ukrainian Armed Forces, whose territory is saturated with potentially hazardous facilities, we must immediately begin training specialists for the protection of the troops from unfavorable factors in accordance with the multilevel military education concept that has been developed.

In the process, specialists with a "baccalaureate" qualification may occupy the leading officer positions of platoon and company commander in the special protection troops. The "master's degree" qualification provides the right to fill the positions of battalion commander, deputy regimental commander for special troops protection, and also advisor to the regimental commander in all services and branches of troops. Advisors to division and corps commanders and commanders of special troops protection regiments must mandatorily have a higher military education.

That is what the concept for training troop protection specialists looks like in the general system of training military cadres.

Chronic Shortage of Aircraft Spare Parts

92UM1241A Kiev NARODNAYA ARMIYA in Russian
24 Jun 92 p 1

[Article by Captain Vasiliy Verbitskiy: "The 'Idle' Aircraft"]

[Text] It has already been a month since Aircraft Technician Senior Lieutenant A. Kutyrev completed the routine maintenance work on the military transport aircraft, but the aircraft still sits on the TECH's [Technical Maintenance Unit] hardstand. What's the matter?

Maybe it isn't needed in the squadron's combat formation? It's needed more than ever! It's no secret that deliveries of aviation fuel to units have recently been reduced to a minimum. Flying personnel are using any opportunity to fly, to prevent an interruption in their professional training and to not lose the required skills. But in this case it is even harder to understand: why has an aircraft that has undergone preventive maintenance not left the technical maintenance unit maintenance area?

And the reason for that is that important equipment has been removed from this aircraft: a fuel tank valve, two units from the automated refueling system, a fuel pump, and two portable fire extinguishers from the cockpit.

All of the units and assemblies listed above were temporarily borrowed on another aircraft while the one we are talking about was in routine maintenance. To take them back means to idle another completely serviceable aircraft that is flying. But the most terrible thing is the fact that this situation has become typical. A helicopter has not flown for a long time due to the lack of a fan. An engine needs to be replaced on another of the military transport aircraft. And we could continue this list.

And so it turns out that aircraft are being made unserviceable at the hands of the maintenance technicians themselves who have been compelled to remove equipment to maintain other subunit aircraft in a combat status. The reason—a chronic shortage of spare parts, although the request for their delivery is being compiled regularly and sent out in a timely manner. Moreover, expeditors are frequently being sent after this same equipment but their attempts, as a rule, are turning out to be futile. For example, Senior Aircraft Technician Captain V. Mikhalechuk has driven to an aircraft association several times to obtain a helicopter control system, to change blades, and all for nothing.

Aircraft engineering service experts understand very well that they should not move equipment from one aircraft to another. This has been dictated by flight safety requirements, by life and by the practice of flying work. And nevertheless they reluctantly resort to such violations.

Unfortunately, the chronic shortage of spare parts is not the only difficulty that aviators have to experience. Recently the quality of aircraft-technical support has drastically decreased. The regiment has not had fuel sensor test systems for many years and a flaw detector, which was used to inspect propeller blades, was written off already last year. And they have practically no hope of obtaining a new one. They have to carry out these routine maintenance tests at other bases and this causes additional expenditures and time delays.

The aircraft regiment's technical maintenance unit has also encountered a tool shortage problem. This is what Sheetmetal and Machining Group Senior Aviation Mechanic Senior Warrant Officer A. Larin said in this regard.

"We don't have a single drill. We obtained the last two three years ago. The situation is also very poor with metal cutting tools. We have a catastrophic shortage of hack saw blades to cut metal, lathe tools, taps and milling cutters. We have been compelled to use our home tools. Say, Warrant Officers N. Filimon and V. Stepkin have recently brought emery wheels. The machine tool inventory has also required renewal for a long time..."

American specialists have calculated that a pilot needs to fly no less than 200 hours per year in order to steadily increase his professional skill. Our pilots in general will soon not be able to fly at all due to the comprehensive shortage.

The trouble is that they are still managing to carry out the assigned mission while using old reserves and resorting to barter deals. But what will it be like for Ukrainian aviators tomorrow?

BALTIC STATES

Estonian Currency Exchange Impact on Military

92UN1755D Moscow KOMSOMOLSKAYA PRAVDA
in Russian 1 Jul 92 p 1

[Article by G. Sapozhnikova: "There Is Ammunition, But There Are No Kroons"]

[Text] There are 157,000 of us, the hungry people for whom the Estonian Republic would not exchange money. The military missed out simply because it was the military. At best, only a few officers' wives with permanent residence permits could get Estonian kroons, and not even all of them, because the residence permits of servicemen's families have been severely restricted in the Estonian Republic in the last few years.

I called Major-General Ziya Abdurakhmanov, commander of an Air Defense unit:

"Pardon me for getting so personal, but how many kroons do you have in your pocket, Ziya Abdulayevich?"

"Two and a half. Just enough for a bottle of beer."

"But how do you live?"

"Our families are issued food rations from old supplies. We cannot buy any new food because we do not have the currency. We cannot arrange for the exchange of currency either: The mechanism for the exchange of currency between Russia and Estonia has not been worked out yet. We are advising people to be patient, but there are some feelings of resentment. Not against Estonia—it is moving along its own, completely predictable course; and not against Russia—we are used to the jokes our state plays on us. The feelings of resentment are general."

I just want to add that servicemen are unable to stand in line at the centers for the exchange of dollars and marks for Estonian kroons and that these lines wind all around Tallinn.

Kaitseliit to Continue Resistance to 'Occupation Forces'

92UN1755C Moscow KOMSOMOLSKAYA PRAVDA
in Russian 4 Jul 92 p 5

[Article by G. Sapozhnikova (Tallinn): "They Prefer French Boots and Russian Assault Rifles in the Estonian Army"]

[Text] Thanks to the weekly EESTI EXPRESS—my colleagues recently gave readers detailed instructions on how to recognize the Estonian defense forces by their clothing. Now I hear that the 500 dark-green field tunics Estonia received as a gift from France were issued to Kaitseliit ("Defense League") volunteers, and 500 pairs of French boots were issued to the soldiers of the Estonian Army. I hear that border guards are wearing dark-blue shirts from the Sangar factory and that the Marat factory has made the soldiers' life better and more cheerful by supplying them with colorful underwear.

It would be nice if my colleagues could also publish a paragraph or so on military operations because it has been extremely difficult to keep track of recent events. First "Greens" armed with shears tried to take control of a military base, then border guards began taking passengers off trains. Furthermore, they have even started doing this in Ivangorod, on Russian territory. There is no question, however, that Kaitseliit has organized the most extravagant military operations. The recent stingy accounts of its heroism have resembled combat summaries. In the last week of June alone, Kaitseliit requisitioned 38 000 rounds, 25 Kalashnikov assault rifles, the same number of bayonets, and 112 magazines from the Russian Army. To keep the public from accusing the soldiers of falling prey to the common human desire to live off the property of others, the Haruus Kaitseliit squad came up with a political excuse: "Because the present government's talks with Russia regarding the withdrawal of its troops and the transfer of their property to us have not produced any results, we feel that the only thing we can do is continue the armed resistance that was cut short in the 1950s. We promise we will not stop resisting until the last soldier of the occupation forces has left the territory of the Estonian Republic." The world flinched.

In any case, no state or government entity in Estonia has responded publicly to Kaitseliit's statement yet. Colonel Ants Laaneots, chief of General Staff of the Estonian Defense Forces, said the statement should not be taken seriously because Kaitseliit is a volunteer organization, and he implied that he had already taken measures against the authors of the statement. Furthermore, he stressed that the aggravation of relations with the army was Russia's fault, and not Estonia's. "If Russia had

agreed to the just demands regarding all that the Red Army confiscated in 1940, today's problems and the decisions of the Estonian Supreme Council on the nationalization of the Soviet Army's property would not have to exist," the Colonel explained. He categorically refused, however, to give out Kaitseliit's telephone number, saying that the young men there were so obstinate that this might not be safe.

The "young men"—or, more precisely, Commander Kaleb Ots of the Haruus Kaitseliit squad—turned out to be extremely polite. He told us that he was a candidate of technical sciences in civilian life, that he had defended his thesis in Moscow, and that his life was not easy because Kaitseliit does not receive money from the government, but that it is his moral duty to defend his people. According to his data, he reported with chagrin, "there are 800-900 assault rifles in the hands of Inter-front members and armed gangs" in northeast Estonia, which is densely populated by Russians. This is why the members of Kaitseliit have had to arm themselves. They had no other choice. Another of the organization's duties is to guard national property and make sure that it—"i.e., the former property of the Soviet Army"—is not taken out of the republic. This is the plan: As soon as they receive an intelligence report of imminent withdrawal, the volunteers will immediately go to the place where the Russian soldiers are located and take possession of as many of their rifles and rounds as possible, for safety's sake. How does Mr. Ots feel about the Russian leadership's unequivocal order to put up armed resistance in such cases? Kaleb Ots predicts that Russia would have problems in the international arena because "Estonia is not Moldova."

Mr. Ots asked me several times to report that Kaitseliit will not shoot first, but only in response.

Apropos of This

The Tallinn City Council has passed a resolution prohibiting the movement of Russian servicemen, vehicles, and equipment through Tallinn. Beginning on 10 July, soldiers and sergeants will be allowed into the city only between 900 and 1600 hours, and only with a special pass from the city council. This regulation will be enforced by the police and the "Defense League."

Lithuania Makes Plans for Navy

92P50124A Vilnius GIMTASIS KRSTAS
in Lithuanian 2-8 Jul 92 p 3

[From the "Lithuania in the Mirror of the Press" column]

[Text] Until recently we used to see, from the shores of the Baltic, Soviet naval ships protecting the USSR state border. It is a state border now as well, but no longer that of the USSR. And soon our ships will be controlling it. We are in the process of creating the naval forces of the Republic of Lithuania. Journalist Jolanta Luneviciene in an interview in the journal KRASTO APSAUGA No.

25, under the heading "And We Will Sail Out Into the Blue Sea..." talked with Captain Eugenijus Mieliauskas, head of the naval department Joint Staff.

He said that a shore security team has been approved. There are no more Soviet ships or border guards in the ports. Soon we also expect to take over the barriers. At present we do not have our own ships, but have already agreed to buy them from the Commonwealth of Independent States. Later, we will have to build our own. We are consulting with the Latvians on this. They have a well-known shipbuilding facility. The equipment and armament for the ships would have to be bought abroad.

The naval fleet will concern itself with territorial waters and the security of the economic zone. It will also be in charge of the entire hydrological service, the lighthouses, and navigational signals beyond the harbor gates. And, if there is an accident, for example, an oil spill, we have to be prepared to clean it up. The service will be set up jointly with the Estonians and the Latvians.

CAUCASIAN STATES

Report on 'Fragile Peace' in South Ossetia

92UM1284A Moscow KRASNAYA ZVEZDA 21 Jul 92
First edition pp 1, 3

[Article by Maj Aleksey Petrov and Capt Vitaliy Strugovets: "A Fragile Peace in South Ossetia: Peacekeeping Forces Provide Some Stability"]

[Text] One week has passed since the tripartite peacekeeping forces formed in accordance with the Dagomys agreements entered South Ossetia. Is it possible to speak of any results? Yes, it is, since shelling of Tskhinval has ceased, there are no alarming reports of numerous victims suffering among the civilian population, and now restored to use is the Vladikavkaz-Tskhinval Highway, which was closed to traffic for more than two years. First to travel the route between Russia and Georgia subsequent to the arrival of the peacekeeping forces were leaders of administrative services, who have the task of determining the nature and extent of cleanup operations required in the city. The first group of refugees has returned to its homeland. This has been made possible largely through the efforts of the tripartite peacekeeping detachments.

The mixed peacekeeping forces have taken up their positions for monitoring their zones of responsibility. The reader is reminded that they are to monitor the entire area lying within a radius of 15 kilometers from the center of Tskhinval and the safety corridor situated 7 kilometers on each side of the administrative border of the former South Ossetian Oblast. The "soldiers of peace" have set themselves up between the Georgian and Ossetian villages; patrol the roads; prohibit entry of outlawed armed groups into the safety corridor; confiscate illegal caches of weapons; and deactivate mines.

For the present, the troops are carrying out their assigned missions without the use of weapons. There are no recorded incidents of any firefights with armed groups, of which there is quite a number, according to information gathered by security agencies.

However, it is not only the bandit-like groups - let us call a spade a spade - that present a threat to the fragile peace. Tengiz Kitovani, a co-chairman of the mixed Control Commission, feels that it is "not possible to rule out the possibility of confrontation between the peacekeeping forces themselves." There may be grounds for the fears expressed by Georgia's defense minister.

The Caucasus has been known from time immemorial as a place possessing a powerful tradition of blood feuds. We could see this for ourselves in our conversations with fighters in the Ossetian and Georgian battalions of the peacekeeping forces. Quite a few of them have lost friends and relatives in the interethnic conflict. Even now, no one will guarantee that, after being handed a weapon, these people - generally honest and respectful - will not do something drastic at the mere memory of a past affront. A shot fired accidentally or even the mere mention of a word, perceived as an insult, would be sufficient to set them off.

The penchant for initiating a blood feud is not rare even among the civilian population, unfortunately. In the Georgian village of Yeredvi, we met a young man who was wearing on his chest a black ribbon with attached photograph of a relative killed in the interethnic conflict. His reaction to all our entreaties for the necessity for peace consisted of pointing to the small photograph and saying quite simply: "Who will avenge his death?"

The following day, there was an Ossetian riding in our bus. He was wearing the same kind of photograph on his chest.

It is unlikely that they will seek revenge at this time, with Russian paratroopers comprising the greater part of the peacekeeping forces stationed in many settlements. But what will happen after they depart?

Now let us discuss possible conflicts. There is a saying that applies to this: "Put not your hand between the bark and the tree." This is the position in which the Russian soldiers find themselves. They already were "paid back": Private Yevgeniy Zdvizhkov of the 104th Airborne Regiment was killed in the village of Dmenisi.

This situation reminds us of the Karabakh predicament, in which 27 servicemen - all members of internal troops - lost their lives in four years of this kind of "peacekeeping efforts." The situation is similar in South Ossetia: stirring up of interethnic discord - armed encounters - loss of control over the situation. Also, as a panacea for handling similar troubles, resolution of the conflict involves the employment of armed units, which include subunits of the Russian Army. Let us hope to God that the situation is not as bad as we may think.

As far as the 104th Airborne Regiment is concerned, this is not its first involvement with "hot spots": Baku, Tbilisi, Vilnius, Fergana. It in each case arrived on the scene on the basis of an agreement with the local leadership, with the best of intentions of truly helping the people. However, it usually turned out that they were redundant. The troops likewise do not entertain any illusions relative to their presence in South Ossetia. "Nothing can be accomplished here by force of arms," we were told by officers.

It appears that the resolution of the problem should be largely political: providing South Ossetia with an offer of a definite status. This is an item on which authoritative politicians and observers agree. Several possible solutions have been put forth: as an autonomous entity within Georgia (as in the case of North Ossetia as a part of the Russian Federation); complete sovereignty; and, finally, a solution mentioned the other day by South Ossetian Supreme Council Chairman Torez Kulumbekov: "reunification of North and South Ossetia to form a single republic." It is still not clear which option will be chosen by the politicians, since representatives of the governments have imposed a moratorium on discussion of this problem. It seems that no one is willing to make any concessions in search of a compromise. Akhsarbek Galazov, South Ossetian Supreme Council chairman, said: "This is not the time, at this stage of resolution of the problem, to enter a labyrinth by thinking about the status of South Ossetia." Everyone agrees that the principal task for the present is putting an end to the shooting, keeping apart the opposing sides, and creating conditions conducive to return of the refugees.

We believe that the above can be achieved to a great extent through the efforts of the peacekeeping units, the politicians, and specialists arriving for the purpose of restoring the Tskhinval area's economy. However, if things remain at a standstill, there may be a renewal of violence, since a cease-fire and return of refugees still do not constitute a resolution of the problem. The question of South Ossetia's status - the cause of everything that has happened here - still remains open.

What kind of prediction can be made relative to future events?

There is little likelihood of a change in stance of the government of Georgia, which stands in definite opposition to the opinion held by the majority of South Ossetia's residents, who have declared their homeland to be a republic. However, the news has spread that the last few days have seen differences in opinion on this problem expressed in the State Council of Georgia.

It is also difficult to expect support for the announced South Ossetian sovereignty on the part of the Russian leadership, which is observing the rules set by the CSCE relative to inviolability of borders. This, incidentally, is the great hope in Tskhinval.

It is possible that the factions - the Russian and Georgian - will come to an agreement relative to restoring South Ossetia to its former position, whereby it will revert to being an autonomous oblast within the Republic of Georgia. But this must be accompanied by the granting of the associated rights, which would be officially set and guaranteed by all the interested sides, with the problems peculiar to the latter resolved. In our view, the same as in that of a number of leaders in North and South Ossetia with whom we had a chance to speak during our trip there, this is the settlement most acceptable to everyone.

CENTRAL ASIAN STATES

Tajik Defense Committee on National Guard

92US0657A Dushanbe NARODNAYA GAZETA
in Russian 19 Jun 92 p 2

[Press release from the Press Center of the Defense Committee of the Republic of Tajikistan: "On the National Guard of the Republic of Tajikistan"]

[Text] In accord with the decree of the President of the Republic of Tajikistan of 10 June 1992 on Establishing the National [People's] Guard, the Republic Defense Committee has prepared a number of requisite documents.

These provide the explanation that the National Guard of the Republic of Tajikistan is an armed formation in the system of the Defense Committee and in organizational terms is part of the Armed Forces of the Republic of Tajikistan.

The National Guard is designed to defend the constitutional system of the Republic of Tajikistan, protect the President, the government and particularly important government installations, for carrying out suddenly arising tasks, for implementing rescue measures during emergencies, disasters and natural calamities, taking the necessary measures to prevent illegal actions and to safeguard the security of the civilian installations and public.

The National Guard participates in the ceremonies of welcoming and escorting the heads of states arriving on a visit in the Republic of Tajikistan.

The National Guard is to be manned on a contract basis from among persons who have undergone military service. The officer personnel is recruited for the National Guard from among officers of the republic Armed Forces, the CIS, the National Security Committee, the Border and Interior Troops in accord with the regulation governing service by officer personnel of the Armed Forces, the Border and Interior Troops.

The National Guard admits reservists and persons liable for call-up up to the age of not over 45. The primary period of service under contract is 3 years. At the end of the period of military service, the contract can be extended at the request of the servicemen each time for 3, 5, or 10 years.

The drawing up of the documents for persons desiring to enter military service under contract is entrusted to the command of the National Guard. It is also given the right to extend the period of contract service.

For persons for whom a decision has been taken to summon for interviews, the documents are forwarded to the rayon (city) military commissariats.

Medical examination of reservists and those liable for military service who sign up under contract is conducted by the military medical commissions at the rayon (city) military commissariats at the place of residence in the aim of assessing the health, professional abilities and psychological qualities of the candidate for enrolling in military service in the National Guard.

The servicemen undergoing military service in the National Guard as well as the members of their families have full political, socioeconomic and personal rights and freedoms in accord with the standards of international law and the legislation of the Republic of Tajikistan.

At present a Commission for Recruiting into the Ranks of the National Guard has been organized under the Defense Committee of the Republic of Tajikistan.

The National Guard subunits are to be stationed in the Dushanbe suburb, the settlement of Ayni.

Dushanbe Garrison Chief on Need for Russian Troops

92US0657B Dushanbe NARODNAYA GAZETA
in Russian 24 Jun 92 p 2

[Interview with the chief of the Dushanbe Garrison, Col Mukhrudin Ashurov, by TIA Khonar Correspondent S. Ergashev: "Tajikistan Should Have Its Own Army"]

[Text] "Tajikistan should have its own army, but its formation involves the solving of complex economic problems, and this will require time," feels the new Chief of the Dushanbe Garrison, Col Mukhrudin Ashurov.

Col Mukhrudin Ashurov is the first Tajik officer to hold this high army post.

He is 42 years old and was born in Dushanbe in a large Tajik family. He studied at the Shakhri-nauskiy Boarding School and completed secondary school in Dzhirgatal'skiy Rayon. In 1972, he finished the Tashkent Higher Tank Command School and served in the Western Group of Forces and in the Belorussian MD. He was the adviser to the divisional intelligence chief in the Russian Army and in 1984, completed the Military Academy for Armored Troops imeni Mar R. Malinovski. Since November 1991, he has been a deputy division commander in Tajikistan. On 26 May of the current year, by the order of the Russian

minister of defense and the decree of the President of the Republic of Tajikistan, he was appointed division commander and chief of the Dushanbe Garrison.

Speaking with him today is the TIA [Tajik Information Agency] Khonar Correspondent S. Ergashev.

[Ergashev] Mukhridin Ashurovich, the arrival of a new commander usually entails innovations. What changes will occur in the garrison assigned to you?

[Ashurov] Rather not change, but the positive that has remained will be further developed by me. Too much that is irreparable has been introduced into army life under the guise of the new and particularly under the guise of reforms. However, more harm than good results from them.

All my efforts are focused on the training of the personnel in military affairs and on carrying out the Collective Security Treaty which was signed in mid-May at the meeting of the CIS heads of states in Tashkent. In accord with this document, we were entrusted with the guarding of the southern frontiers of the CIS countries against outside aggression.

[Ergashev] What is the legal status of the formation after a unified army was not formed?

[Ashurov] At present, virtually all the troop units stationed outside Russia financially are supported by its Ministry of Defense, including the only division in Tajikistan. Naturally in terms of logistic support, the supply of officer personnel for the troops, uniform and food supply and combat training, the division is subordinate to the Russian Minister of Defense. On the other hand, in line with the territorial location in Dushanbe—for certain questions the Dushanbe Garrison answers to the President of Tajikistan—of several troop units and subunits, there are also several military facilities such as a billeting unit (KECh), a military hospital and military trade organization. In addition to this, a number of the garrison units is subordinate to the strategic forces of the CIS states.

[Ergashev] Repeatedly the politicians and military leaders have stated that the troops of the former Soviet Army will move under the jurisdiction of Russia. In line with this statement, the leaders of a number of the sovereign republics have switched the troops to their republic. However the positions of the military in Tajikistan are not clear...

[Ashurov] The outline of resubordination is clear: the military tribunal and military procuracy have been put under republic jurisdiction. However, I feel that rash steps with the resubordination of the republic troops can create great economic problems. At least 5 billion rubles a year would be needed for support of the division's personnel and its combat equipment. And this, when the standard of living of the people of Tajikistan is much lower than in the other CIS states, will rest as a heavy burden on the republic. It would be much simpler to

"privatize" the army than to support and arm it. Another factor: the resubordination could cause the departure of the Russian-speaking officers and warrant officers [praporshchik]. Officers of the local nationality are serving in our division. But they make up only 4 percent of the entire officer personnel.

A simple mathematical calculation. In order for one officer, after he has finished his military school, to rise to the level of a company commander, it takes at least 6-8 years (including the 4 years of training at the school). It requires 10 years to train a battalion commander while a regimental commander would have to serve 15-17 years. Before I assumed my current post, I had "gone through" all stages of the hierarchy prior to division commander in 20 years.

From this calculation stems the next conclusion: for the transitional period the troops stationed on the territory of the Republic of Tajikistan should be part of the Russian Federation Armed Forces.

[Ergashev] Mukhridin Ashurovich, the Soviet Army has always been multinational. At present, though, the young men are serving on the territory of their own republics. Do you not feel a lack of them in your units?

[Ashurov] Our troop collectives continue to remain multinational. Serving in them along with the Tajiks are Uzbeks, Russians, Tatars and Kirghiz. In a word, those fellows who were born and grew up in the republic itself. Seemingly they would lack nothing to serve worthily in their homeland. However, many, having arrived in our units, soon thereafter leave the place of service. At present our units are below strength.

[Ergashev] Mukhridin Ashurovich, how do you assess your own forces, and what are your plans in the future?

[Ashurov] An additional responsibility has been placed on my shoulders. I see my primary task in securing the life of my subordinates and the members of their families, and in securely guarding the dumps with ammunition, weapons and military equipment. All this requires daily painstaking work both individually as well as with the entire collective. I see my duty in instilling in my subordinates feelings of fraternity and comradeship and a desire to serve honestly and improve their military skills.

Tajikistan Officer Assembly Pledges to Defend Servicemen Against "Provocations"

92UM1280A Dushanbe NARODNAYA GAZETA
in Russian 27 Jun 92 p 1

[Newspaper information: "The Opinion of the Military"]

[Text] Some of the first to respond to the statement of the Presidium of the Supreme Soviet of the Republic of Tajikistan were officers from the military units and formations stationed on republic territory.

Particularly alarming is their point which demands that the troop units and formations stationed on republic territory be immediately put under republic jurisdiction. Certainly this would be a heavy burden on the republic which is already in a profound economic crisis. At least 5 billion rubles a year would be required to support the personnel and military equipment for just one division.

This was discussed by servicemen at an officer assembly. The adopted decree pointed out that the statement of the Presidium of the Supreme Soviet of the Republic of Tajikistan is not thought out, rash and unsound.

"This could lead to a further escalation of instability in the republic," felt the formation Chief of Staff, Colonel Anatoliy Mikhkaylovich Krayev. "The statement does not meet the interests of the peoples of Tajikistan, while the carrying out of a number of its demands could bring the republic to civil war."

The officer assembly stated that the units and formations located on the territory of the Republic of Tajikistan are the guarantee for the stability of the situation—both domestic and foreign political. The decree also stressed that with a further escalation in instability and the continuing provocations against the servicemen and the members of their families, they will take measures to defend the interests of the military and peaceful citizens.

The officer corps also offered to act as the intermediary in the talks between the opposing sides and the republic government, guaranteeing their security.

In conclusion, the officer assembly stated that in the event of ignoring these demands and proposals, it keeps the right to take its own decisions with the informing of the heads of the CIS states of this.

ARMS TRADE

G. Arbatov Interview on Arms Trade

92UM1244A Moscow KURANTY in Russian
No 108 (373), 4 Jun 92 p 5

[Interview with G. Arbatov, director of the USA and Canada Institute, by KURANTY correspondent Mikhail Bredis, under the rubric "One's Own View": "Civilized Trade in Death"]

[Text] When the cold war ended, it left us a heinous legacy, the monstrous military machine. G. Arbatov, director of the USA and Canada Institute, believes that we need resolutely to rid ourselves of it. In an interview with our correspondent he expresses the point of view that civilized trade in death is impossible.

[Bredis] What fate do you think awaits our country's giant military-industrial complex in the near future?

[Arbatov] Let us view the problem from a broader perspective. The main part of the legacy from the cold war is militarism, including its embodiment in the form of mountains of destructive weapons and an enormous scientific and industrial capability. We developed these by depriving ourselves of everything. Rich America did the same by forgoing many necessities.

Why do we need to rid ourselves of this burden? It is an economic necessity. Even if a successful, absolutely brilliant reform is achieved, the nation and half of the industry which operates "for war" will still inevitably decline. Incidentally, the Americans also felt this in the '80s.

The very existence of enormous military machines is dangerous both politically and economically. They have to be supported economically by injecting new funds into their modernization. In the political respect the accumulation of weapons creates a situation which demands further growth of the military machine.

The ending of the cold war was paralleled by another event. The Soviet empire collapsed. The existence of the enormous militaristic monster created many problems for us. A situation developed in which, for a certain time, there was no state but the military remained, and the military began to play an independent political role. How we can complete the process of becoming a Commonwealth of Independent States, painlessly and without large conflicts, is a very serious issue. We need to resolve numerous real problems pertaining to the armed forces. Army units have to be returned from a large number of areas and accommodated here. Many officers therefore have to be demobilized and arrangements must be made for them to have a life of dignity, to live like human beings.

And then, in addition to the military, millions of people are employed in the defense industry. The matter of

conversion is an acute problem, the key to which we have not yet found in many respects.

[Bredis] Opinions are now being voiced to the effect that our weapons producers should engage in arms exports and use the profit to finance the conversion. What do you think of this?

[Arbatov] I do not like some of the ideas being advanced lately? They sound like noble goals, but are in fact harmful, since they could prolong the demilitarization, particularly the conversion of the military industry. The first of these ideas is arms trade. We have suddenly begun to talk about it, while previously it was a secret matter not a proper subject for discussion. Trading in arms was always a fairly shameful affair.

[Bredis] But it is assumed that Russia will participate in the world weapons trade in a civilized manner, observing all the international agreements.

[Arbatov] I do not know. In that case we can speak of civilized trade in drugs, which, by the way, is far more profitable. We must not turn the matter of increasing the weapons trade into a matter of policy. Unfortunately, some of our prominent officials continue to reiterate this idea, especially when they visit those areas of our country with concentrations of large defense enterprises. It is difficult for them to withstand the temptation to reassure those employed in the VPK [military-industrial complex].

We have already seen friction between Russia and the USA over shipments of cryogenic missile engines to India. The world community, particularly the West, is disturbed about statements by Russian officials about prospects for increasing the export of weapons from Russia. We cannot take the absurd position of asking for help and holding out our hand while announcing that we intend to increase the trade in weapons.

[Bredis] But there are numerous local conflicts throughout the world.

[Arbatov] Their numbers are also decreasing. The danger of conflicts has been reduced in such areas as South Africa, Angola, Central America and Southeast Asia. Several new sources of military confrontation have come into being, to be sure. In Yugoslavia, for example. In general, though, the world is not the same as it was prior to 1985. The demand for weapons will drop. One should therefore not count on much from the weapons trade, even at "dumping" prices. There has already been a fairly acute reaction to our first attempts to trade in weapons.

In addition, the active export of armaments can ruin the advantageous image we have recently created. The new image will bring us perceptible gains. Otherwise, who is going to bother with our economic difficulties and consider helping us? How effective it is is another matter. I consider the policy of the International Monetary Fund and that of Ye. Gaydar to be incorrect in many ways, for

example. People are trying to help us, after all. If, in the eyes of the entire world, we become a state which, for the sake of profits—something we always accused imperialism of—produces and trades in weapons, exacerbating conflicts, their attitude toward us will change.

I am afraid that all of this, which leaves us with no way out economically, will have only one effect, to become a pretext for retarding the conversion.

The arms trade is a large international problem. It would be a very good thing (and I hope that Russia takes the initiative in doing so) to raise the issue of renewing talks on controlling the weapons trade. It would be incorrect to talk about banning this trade, since in that case every nation, even the smallest, would be forced to have its own defense industry. This would not help to stabilize the situation. International control is needed, though. I see Russia and the USA with the decisive role in this matter. If they came to an agreement, they could influence other countries engaged in the sale of weapons to join in the control process. And there are a great many of these states: France, Germany, England, the countries of the former Warsaw Pact, Brazil. It is possible and necessary to reach agreement with them and perhaps set quotas on the trade in weapons, which could be reduced gradually. It is essential for each transaction to be registered, preferably by the UN. This would be worthy of Russia's new role and would contribute to a rapid conversion.

[Bredis] And what about those who work in the military industry?

[Arbatov] I still have the impression that the conversion process is being dragged out, apparently in the hope that the old days will suddenly return. Efforts are also made to pressure the government and force it to alter its foreign and domestic policy. This would be a monstrous thing to do right now. There is also the force of inertia. We need to decide. A fighter or a tank cannot be produced on the same assembly line on which pots and pans are being riveted. Enterprises must be turned over in their entirety to civilian industry. We have some successful examples of this, but not very many. The old departments, many of which have simply changed their signs, are clinging to military industry with all their might. Otherwise, they are finished. They talk about how important it is to retain the old teams of skilled workers and scientific personnel. If a team is capable of producing only military items, however, it should not be retained. These people should be retrained.

Today conversion should be regarded as one of the most important national economic and political tasks. Incidentally, intelligent proposals have already been made based on the premise that conversion can be inexpensive from the very beginning. The enterprise has to be shut down for this purpose, while continuing to pay the workers full wages adjusted for inflation for a period of one and a half or two years. On the other hand, there is a saving on materials, energy and transport costs from

the very first day. And this is the same as profit. No normal collective wants to be a parasite and therefore attempts to achieve the production of new products needed by the nation as rapidly as possible.

Conversion is more painful for us than for the Americans because of our economic difficulties and because the defense branches account for a very large portion of our industry. In this situation one is confused and angry at how America and a number of other Western countries cling to the old COCOM restrictions. This is causing deal after deal to fall through, deals which could be of benefit to the conversion of our enterprises. That sometimes occurs because of economic competition, but sometimes, I am afraid, it is simply to belittle our technological capability. For example, a large number of large Russian enterprises could have participated in a fine project for the establishment of space communications, and we were prepared to cooperate. We have missiles, satellites and many other things essential for participation in the project.

An international decision was adopted in March which deprived us of any piece of this project. But then, many nations are taking part in it. Furthermore, the lead company in this undertaking is American. Here is another example. Our company which produces the SU-27, one of the best combat aircraft, reached agreement with the Gulfstream company to produce several small supersonic passenger planes for business flights. Our design office had already advanced a long way in the work, when suddenly objections began to be made—from the American side, as far as I know—under the absurd pretext that this would result in a leakage of American information, even though the main supplier of the technology was our side. If the Americans continue in this manner, it will hamper the conversion and undermine mutual trust. Participation in joint projects is more important to us than any sort of gestures for show. Cooperation in this area would be beneficial also to the Americans.

Providing Housing Via Arms Sales

92UM1247A Moscow NEZAVISIMAYA GAZETA
in Russian 23 Jun 92 p 2

[Interview with Aleksandr Temerko, chairman of the Committee on Social Security for Servicemen under the Ministry of Defense of the Russian Federation, by Pavel Felgengauer, under the rubric "The Army": "An Apartment in Exchange for Weapons"]

[Text] Aleksandr Temerko, chairman of the Committee on Social Security for Servicemen under the Ministry of Defense of the Russian Federation, tells about plans for the sale (use) of military equipment.

[Felgengauer] What is the present situation with respect to the social circumstances of officers in general and to housing construction specifically? Have you been able to acquire funds by selling weapons?

[Temerko] Providing proper social conditions for servicemen is a state task directly linked to the reduction of the armed forces. It must therefore be performed by the state and not by commercial structures. Only 55% of the minimal amount needed to provide proper social conditions has been allocated out of the state budget for the current, 1992 fiscal year, however. This money is enough to build 17,000-20,000 apartments at most, and we have to build at least 36,000.

The funds for providing proper social conditions were allocated in accordance with the president's decree of 19 February. This decree also increased the pay and allowances of servicemen. Another decree was recently signed on the indexing of pay and allowances at a ratio of 1:8. The housing problem is far more difficult. The 19 February decree instructed all local authorities of the Russian Federation to liquidate their housing allocation debt during the first quarter of 1992. Even now, however, at the end of the second quarter, this requirement has been met by only 30%, if even that.

Military costs can and must be cut, but only with a reduction of the armed forces. It would be incomparably easier to reduce the military if we could provide the servicemen with housing right now. The 19 February decree calls for financial assistance for purchasing housing: 50% out of the state budget. This is absolutely inadequate given the current cost of housing, however.

A new presidential decree is presently being prepared, under which servicemen who have served irreproachably for a minimum of 10 years have the right to a 75% discount off the market price on the purchase of housing. An additional 25% will be reimbursed with funds entering the budget from the sale of excess military property.

We believe that 70-80% of those in need will be able to receive real help. A special extra-budgetary fund will be set up for the accumulation of funds. Army Gen Grachev, minister of defense, allowed a month for working out its terms and ratifying it. The Russian government issued special instructions on 6 June authorizing the Ministry of Defense to direct funds derived from the sale of property and equipment rendered superfluous as a result of the reduction of the armed forces "into the financing of state programs for the social protection of servicemen."

[Felgengauer] This all sounds completely wonderful, of course, but how realistic is the possibility of deriving any significant funds from the sale of military property in the near future?

[Temerko] We have turned for help to professional merchants of the Oboroneksport VO and asked them to calculate the total value of excess military property. (Oboroneksport is a foreign trade association of the Ministry of Foreign Economic Relations (MVES).) This organization has traditionally engaged in the arms trade in the world market. It was previously better known as the GIU (Main Engineer Directorate—P.F.). They came

up with a figure of 20 billion dollars U.S. Considering the capabilities of the nations who could realistically be expected to purchase weapons, (the UAR, Pakistan, Taiwan and others, however, we could realistically expect to earn slightly more than 9 billion dollars during the period 1992-1994. We already have firm agreements on that amount: to whom, where to and how much. I do not know whether it is realistic to expect to accomplish this in two years, but it can certainly be done by the end of 1995.

Nine or ten billion dollars in two-three years is a very considerable figure. According to our calculations, this would be enough to provide proper social conditions, reduce the army and even carry out the military reform.

[Felgengauer] World experience in the weapons trade has been that only the intermediary companies earn quick profits. Not just months but years elapse between the signing of a contract and the actual shipments. This applies primarily to the sale of new weapons which have to be manufactured, however. All the same, interstate deliveries are always made on credit, which is paid off over a period of many years. Our country already has many such debtors. Where is the money for the immediate construction going to come from?

[Temerko] Yes, the money is needed immediately. We have reached agreement with the minister of defense that a special administrative structure will be set up within the armed forces to handle the formation of this fund and its subsequent use. The receipts from the sale of equipment will be deposited in special, tax-exempt, frozen foreign-currency and ruble accounts to be invested in the resolution of social problems.

We have more than 10 substantial foreign companies which could provide final-user certification (in the international weapons trade, a customary guarantee that the weapons will not be resold on the weapons black market—P.F.), bank guarantees and guarantees from the corresponding governments. They are prepared to take our weapons and, most important, to pay a 25% advance. If everything goes according to plan, we hope to acquire at least 1 billion dollars by the end of the year. Added to what has already been allocated out of the budget, this should be enough to provide 180,000 officers lacking apartments with housing within the next two years. Then, as the funds come in, we plan to improve the housing of 150,000 officers. We will thereby be establishing the conditions necessary for a drastic cut in the armed forces. Furthermore, there is no need to build housing where it can be purchased. Recently, the construction organizations have been unable to sell housing already built at the new prices, and there are presently many such unoccupied apartments.

It is also planned to provide financial assistance in setting up farms for retired servicemen (around 50,000 have already expressed a desire to participate).

By the way, we do not intend to spend the foreign currency directly. We convert it through the Foreign

Trade Bank. This will be an additional financial infusion into the nation's economy. It should be mentioned that the anticipated amounts are entirely comparable to the aid offered by the MVF [International Monetary Fund].

In addition, new jobs will be created. A total of 30,000 people have been laid off by the Moscow Construction Committee alone in the past two years for lack of work. The military construction workers are also underemployed right now.

[Felgengauer] How is the profit from the sale of military weapons to be distributed?

[Temerko] The profit has to be apportioned so as to give the actual owners an incentive to sell it. Otherwise we shall get nothing. At least 50% must be given to the branches of the armed forces and the districts from which the equipment was taken and in which the weapons were prepared for sale. The funds are only to be used for housing and social purposes, however. Otherwise, they will have to pay considerable taxes. The rest will be utilized in a centralized manner, for the entire military, depending upon housing needs and the social situation.

[Felgengauer] Who will regulate the sale of weapons to foreign countries?

[Temerko] We have an agreement with the MVES and Deputy Minister Vladimir Shibayev, in charge of arms exports. We also work with the Supreme Soviet, with Vitaliy Vitebskiy's group, with Valentin Sychkin, deputy chairman of the State Committee for Property, and with the Commission on Technical Military Cooperation headed by Prime Minister Yegor Gaydar. We shall strictly observe the UN decisions imposing an embargo on exports to certain countries. We have reached agreement with the MVES that we respect one another's markets and avoid competition. We have also exchanged lists of sales planned for the immediate future.

[Felgengauer] What will the new export association be called?

[Temerko] This will be decided by Gen Grachev, minister of defense. Several possibilities will be suggested to him. The main thing is that this structure will be authorized to engage in negotiations on its own, to conclude contracts and to settle accounts under the contracts for the sale or use of weapons both within the nation (aircraft of the transport aviation, trucks and so forth) and abroad.

[Felgengauer] Will there be a stable demand for the excess military weapons?

[Temerko] A fairly difficult situation has presently developed in the world arms market. Many nations, primarily the USA, are "dumping" weapons onto the world market as a result of overall cuts in armed forces and weapons, and also due to the probability that a new generation of qualitatively new weapons will come into being in the decades immediately ahead. There is a

demand for our weapons, however, particularly aviation equipment. This includes army aviation equipment, which has undergone flight tests, passed the army acceptance procedure and demonstrated excellent dependability. It is frequently taken over newly produced equipment. It is important not to let weapons "lie around" and become obsolete.

[Felgengauer] Who made up the contracts under which foreign countries are even prepared to pay a 25% advance? The MVES specialists?

[Temerko] These contracts were prepared by various structures. Some of them were looked over by the MVES. The export firms operating under the MVES have enough work just selling new equipment (produced at plants of the VPK [military-industrial complex]), however. We therefore decided not to burden them with our problems as well. Particularly since, even if this equipment went through them, the real users would be the military specialists and the military plants at which the "final touches" have to be made on the equipment.

[Felgengauer] What do you mean by "final touches"?

[Temerko] Aircraft on line (the MiG-29 or the Su-25, for example) cannot be sold as they are. They carry new and classified equipment banned from export. The equipment therefore has to have "final touches" to convert it to the export versions. They would gladly buy it without these "final touches," of course, and pay a large price for it.

[Felgengauer] Who will service the equipment sold?

[Temerko] Servicing will be performed through the same economic structure which sold the equipment, with the involvement of corresponding specialists from the armed forces.

[Felgengauer] What kinds of equipment will be offered for sale?

[Temerko] T-55, T-72M1 and T72C tanks, BTR-60 armored personnel carriers, MiG-29, MiG-29UB, Su-27, MiG-31, Su-25, Il-76, An-12 and An-24 aircraft, various models of firearms....

[Felgengauer] And to how many nations?

[Temerko] A fairly limited number. While the MVES is actually selling weapons to approximately 50 countries, we have contracts with only 15. We would actually like to reshape "our" market. And, since almost all commerce in the world goes through middlemen, we shall attempt to find the best middlemen and establish stable links with them.

[Felgengauer] When will deliveries begin?

[Temerko] We have to formalize and organize everything. At a board meeting to be held in the immediate future we shall submit the structure to the minister of defense and then begin to implement the program.

Everything is essentially ready. It should be stated that this program is the result of several years of work.

We would like for our work to be publicized as much as possible. After the contracts are signed, we shall submit to the public precise information on what countries we plan to provide with weapons, and how many. We shall not give away commercial secrets in the process, of course. Particularly, since at the UN nations exporting weapons adopted a decision to declare the amounts of the contracts and the lists of items involved. This should reduce any possible leakage of weapons onto the black market.

[Felgengauer] In Oslo just recently, in June of 1992, the former Soviet republics signed the Treaty on the Limitation of Conventional Weapons in Europe. It had been signed in the fall of 1990 in Paris by President Gorbachev for the USSR. The treaty takes effect soon, after which excess weapons covered by it can no longer be sold. Under the terms of the treaty they may only be destroyed, and at each country's own expense. Will this affect future prospects for the sale of military equipment?

[Temerko] International treaties which have been signed must be observed. The MID [Ministry of Internal Affairs] should perhaps give greater consideration to our country's interests when it concludes them. Equipment suitable for sale should hardly be included on the list to be destroyed. The Americans never do this. This is all the more important since we have absolutely not worked out the technology for salvaging equipment. The cost of converting a tank into scrap metal costs more than the metal produced. Equipment has to be destroyed, though. Approximately 10 billion dollars worth.

The Paris treaty applies only to the European part of the nation, however. The most expedient thing to do would therefore be to ship the most valuable equipment beyond the Urals and sell it on the foreign market later, the nation's defense capability permitting. This would involve considerable additional costs, however, and there is not even enough money for housing. In any case, the equipment which we are offering for sale is not subject to the terms of the treaty.

Reconsideration of Value of Arms Sales

92UM1251A Moscow *NOVOYE VREMYA* in Russian
No 16, Apr 92 pp 28-31

[Article by Retired Major-General, Candidate of Military Sciences, and "Generals for Peace and Disarmament" Group Member Vadim Makarevskiy: "Missiles Are in Great Demand: Deadly Commerce... While Receiving Billions From the Sale of Weapons, Russia May Lose Much More"]

[Text] A massive shift and concentration of arms at the planet's "hot spots" is occurring as a result of the arms trade. If you assess today's military might of 13 of the most active weapons of death purchasers (the DPRK, South Korea, Vietnam, India, Pakistan, Iran, Iraq, Syria,

Israel, Egypt, Saudi Arabia and other Persian Gulf countries, and Libya), it turns out that it nearly exceeds the total that the NATO bloc has:

Types of Weapons	Purchasing States	NATO Countries
Tanks	31,000	20,000
Armored Vehicles	34,000	30,000
Helicopters	1,170	2,000
Aircraft	5,800	6,800
Total Armed Forces Strength	more than 7,000,000 men	less than 5,000,000 men

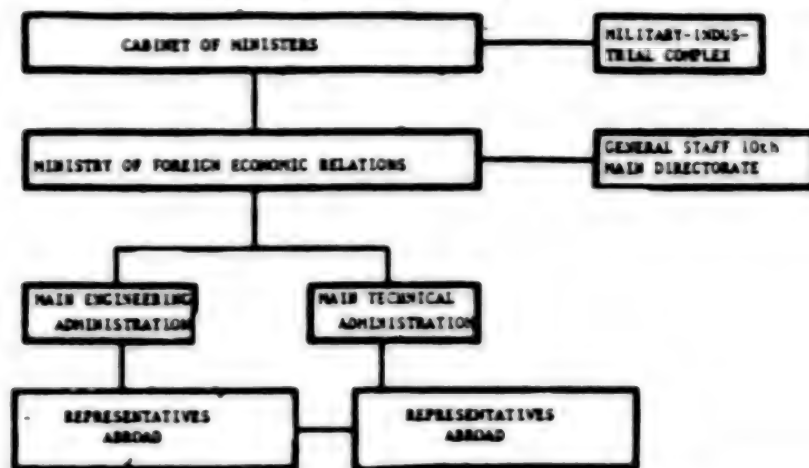
Nevertheless the increase of the military might of the developing states has still not produced a frightening impression in Europe and the United States. The war in the Gulf did not add fear. The wars in Vietnam and Korea have faded into legend. And in Russia the bitterness of the losses in Afghanistan are not usually linked to the arms trade which the USSR conducted and which the CIS states are currently conducting. The money smells of gunpowder.

Of course, not only Russia and the other CIS countries trade arms. But let's nevertheless look at what their proportion is in this business. The SPIRI [Stockholm International Peace Research Institute] annual, which publishes information on arms and disarmament in the world for 1991, provides these numbers: from 1986 through 1990, Third World countries imported a total of \$101.4 billion worth of arms. The United States' share was \$21.7 billion and the USSR's share was \$43.1 billion (this is the assessment of the cost and not what the seller actually received. They were sold at lower than market prices.). In 1989, the USSR had 37 percent of world arms exports and the United States had 34 percent. In 1990, the USSR's share had somewhat declined to 29 percent and the United States' share had increased to 40 percent. Totals for 1991 have not been added up, however, there are grounds to suggest that currently Russia and the Commonwealth have regained their lost primacy.

In Russia, the Ministry of Foreign Economic Relations (MVES) carries out military deliveries abroad based on Cabinet of Ministers decisions which places the appropriate orders to the country's military-industrial complex enterprises. There are two special administrations in the MVES: The Main Engineering Administration (GIU) and the Main Technical Administration (GTU). The former carries out the sale of arms and military equipment and the latter—the sale and construction of military infrastructure facilities. Both administrations have their own representatives abroad who are assigned to embassy staffs and subordinate to the economic advisors.

The administrations are manned by military servicemen. A colonel-general heads the GIU and a lieutenant-general heads the GTU. The General Staff's 10th Main Directorate selects and trains cadres for the GIU and GTU (military advisors and specialists).

Diagram of Russia's State Organs that Carry Out the Sale of Arms Abroad



The GIU and the GTU are the traditional monopolists in the sphere of sales of domestically-produced weapons and military equipment abroad. Indeed, recently the right to deliver weapons to foreign countries was granted to other military structures which have created joint commercial organizations. This decision was made with the goal of correcting the material situation of servicemen. However, it did not prove worthwhile due to abuses and it was recently repealed.

With few exceptions, the arms purchasing clientele they have selected does not cause any special confidence. During the last ten years, Iraq imported \$27.3 billion worth of arms of which more than half was provided by the USSR. Although some dictatorial regimes, which the Soviet Union armed based on political considerations, do not currently receive arms from Russia, military cooperation with Cuba, which includes arms deliveries that have formally been paid for, judging by everything, continues. Arms that are produced in the CIS support dictators, pollute the atmosphere in the world, and preserve in themselves the rudiments of that global confrontation which Russia has decisively, loudly and publicly rejected.

The political, economic, moral, and strategic advisability of Russian arms exports also causes its assortment of doubt. First of all missile technology, the notorious operational-tactical SCUDs with a range of up to 300 kilometers. At least 6-7 developing countries have received from the USSR no less than 300 launchers with an enormous reserve of missiles. The missiles have been modernized and their range has been extended to 900-1,000 kilometers in Iran, the DPRK, and Iraq.

Export Boomerang

Besides SCUD-Bs, FROG-7 tactical rockets with a range of up to 70 kilometers have been delivered. The Soviet Union primarily supplied these surface-to-surface rockets to the Middle Eastern and other developing

countries. Only China competed with the USSR and recently information has arrived about the appearance of military equipment from the countries of the collapsed Warsaw Treaty in the Third World. The treachery of this type of commerce has already repeatedly manifested itself in practice. No matter to what kind of friends and even "brothers" these exported weapons have been addressed, no one can provide guarantees that they will not be turned against the manufacturing country later: American arsenals in South Vietnam became the war booty of Hanoi's troops, the primary mass of Soviet weapons that were lavishly shipped to Egypt ended up in Israel's hands, and the Afghan Mujaheddin also fought with Kalashnikovs. The proximity to the CIS borders of those regions where the concentration of arms is currently continuing increases the threat even more. The situation in the purchasing countries is unstable and changes can occur at any minute here, the consequences of which are unpredictable.

Nevertheless, so far no attempts have been undertaken in Moscow to somewhat seriously calculate the results of the arms sales. And previous decisions on Soviet deliveries of this type have been made at decision-making levels which did not delve into the military-strategic analysis of the situation. The General Staff Main Operational Directorate was not a participant in this decision-making.

Of course, the advocates of continuing arms sales have their reasons. The appropriate interstate treaties were signed and the violation of treaties, even under the most noble pretexts, is a quite dangerous practice. And you cannot create conversion in one moment, so whatever few pitiful dollars military plants can get for exported products is just a drop in the bucket and thanks for that. We can also agree with the reason that others will attempt to occupy the place that Russia has abandoned in the world arms market.

the world is over-saturated with weapons and first of those countries in which Russian military-industrial complex lobbyists and opponents of conversion see their interests. And bringing that over-saturation to a critical point is an insane, shortsighted policy. But, in order for us to be able to say its piece here, we need to keep it informed about Russia's military-commercial efforts: information it still culls primarily from foreign sources.

Of course, we have to sell arms, we have accumulated too many excess weapons. In the last years of its existence, the USSR did not begin to participate in various arms sales by chance. The goal was obvious: to find new markets. It is as if Russia also does not intend to reject advertising operations. A special commercial company has even been created under Marshal Shaposhnikov's staff. Yes and a significant part of our military-industrial complex as before manufactures arms in quantities that exceed our needs. But this is a question of how to sell weapons under mutually advantageous terms and to give them "simply like that" for endless credit. Furthermore, a differentiated approach toward purchases is needed. One matter is balanced peace-loving countries, another is Libya—a patron-state (and possibly a sponsor) of international terrorism. Differentiation is especially needed right now when we are noting a previously unprecedented outburst of deliveries of Soviet weapons abroad. By way of illustration, they say that 1,000 to 1,600 aircraft will be sold which is equal to what exceeds the current aircraft fleet of Israel, Syria, Iraq, taken together.

Armor—to Scrap

...the differentiation and review of existing agreements we must, without delay, freeze and also tear up agreements with militaristic dictatorial regimes on deliveries of ammunition, spare parts, equipment maintenance and personnel training. We need to reject any agreements that are associated with the sale and maintenance of surface-to-surface missiles and launchers.

...statements of Russia's highest leaders that have been heard recently and the agreements on this score with the United States instill a certain hope. The meeting of representatives of the five countries that are permanent members of the Security Council last year in Paris was a remarkable step in the right direction. There are grounds to suggest that we expect new concrete steps after Boris Yeltsin's meeting with George Bush. Austrian Federal Chancellor Vitzky recently advanced an original proposal: in the near future, the industrially developed states of the West begin major arms purchases from the CIS member states with the aim of turning them into scrap. In the end, we can "kill two birds": the arms will not end up in the hands of dangerously dangerous regions and the former Soviet states will receive the hard currency they need.

DEFENSE INDUSTRY

Russia Financing Byelorussian Defense Industries

92UM1248B Moscow NEZAVISIMAYA GAZETA in Russian 20 Jun 92 p 3

[Unattributed Interfax article, under the rubric: "NG Reports": "Byelorussia"]

[Text] Russia will finance Byelorussian defense industry enterprises. This agreement was achieved during the visit to Minsk of a Russian Ministry of Defense delegation headed by Deputy Chief of the General Staff Gen-nadiy Gichkin. More than 5.5 billion rubles are being allocated to do this.

Furthermore, the Russian Federation government will pay Byelorussian military plants all of the many millions of rubles of debt for products that have been manufactured and shipped to Russia by them.

Gladyshev Sees Defense Industry as Salvation of Economy

92UM1248A Moscow TRUD in Russian 25 Jun 92 p 2

[Interview with Russian League of Defense Enterprises Vice President, "AvtoReS" Concern President, and Doctor of Technical Sciences Vladimir Ivanovich Gladyshev by V. Badurkin: "The Defense Industry Can Save the State if It Itself Can Survive"]

[Text] Today the defense industry is ill and the consequences of its ailment have had an impact on us. Will it manage to be cured? The interview with Russian League of Defense Enterprises Vice President, "AvtoReS" Concern President, and Doctor of Technical Sciences V.I. Gladyshev is about that.

[Badurkin] Vladimir Ivanovich, recently we increasingly have the opportunity to hear that many defense complex enterprises have "collapsed" into an economic hole and that the state has abandoned first of all its favorite "brainchild" to the whims of fate. But conversion really did not begin yesterday and not even last year. Already in the middle 1980's nearly all "post office boxes" received the command to expand the production of consumer goods. So why today, 5-7 years later, have they found themselves facing financial and technological collapse?

[Gladyshev] First of all, at that time began not conversion, that is, not the reduction of military production and the increase of the plan to produce consumer goods. And not at all enterprises. No one removed defense orders from us, on the contrary, they assigned a great deal of work to us. Secondly, our general customer—the ministry of defense—convinced us until October 1991 that henceforth orders would be totally adequate. Many people patiently waited for the appropriate law and conversion program and for state capital investments for these goals. Even a year ago, nothing presaged the current collapse.

[Badurkin] What does it consist of?

[Gladyshev] The main thing is a drastic reduction of the state order for our products. Right now it totals 12 percent throughout the sector. But some plants have generally not obtained anything. Can you imagine what this means for an enterprise that is located somewhere that is far away from a large city?

I was at Safonovskiy Plastics Plant recently. The enterprise, at which more than 5,500 people on two full shifts previously made containers for missiles, stands idle. It has turned out that no one needs the latest equipment, modern technologies, and thousands of high class specialists. The director has nearly come to fisticuffs with our bureaucrats for no reason. And they do not give orders and they do not permit them to resort to privatization. They say it is not appropriate. But is it appropriate not to pay people their salaries for three months? This is not Moscow where you can get a job at another plant. Or take all of these stealth-cities which are also not on the map. There all life depends on an order for production.

The new situation in the economy caught many leaders of enterprises unaware. We need to conduct marketing research, look for resources for conversion and master a new product. Now there are no funds for mastery of new products. Banks only give us short-term credits and at insane interest rates. We need to set up the supply system from zero. You need to track prices for components day and night—otherwise you will go broke.

[Badurkin] Maybe they were hasty in eliminating the sector ministries?

[Gladyshev] On the contrary, they were late. We should have "shifted the arrow" from administrative to economic rails a long time ago. As a result, as of today we have found ourselves totally without management. The Ministry of Industry of All Rus will for a long time yet still be at the stage of formation. And former ministry workers with their old customary management methods have arrived in the departments. They do not know how to manage in a new way.

[Badurkin] Right now, all sorts of concerns, corporations, and associations will appear like mushrooms after rain... What is this—the fashion or the dictates of the times?

[Gladyshev] These structures fill out the management vacuum that has been formed today and on a new economic basis. Not simply professionals, but people who are ready to look for nontraditional work methods and risk have mainly come to them. Including personal risk. They find profitable orders for them which can be carried out with existing capacity without additional investments, based on contracts with enterprises that have united in a concern. Of course, you need to thoroughly know the plant's technological capabilities to do this.

In my view, only this is promising—voluntary and mutually beneficial—cooperation of producers and managers. Those same structures which they can only take away and divide—they will tear out.

[Badurkin] But still, Vladimir Ivanovich, why has the once wealthy defense industry found itself on the "church portico"?

[Gladyshev] The image of the wealthy monster is a myth. The defense industry never had a full purse. The level of profitability for our enterprises was established at a total of 13 percent.

Impoverishment began since April 1991. The cost of components, raw materials, and materials, and salaries drastically increased and they did not permit us to raise the prices for end products. Many plants immediately found themselves in debtors' prison. They didn't even have anything with which to pay salaries to the workers. Specialists began to leave. And not only from the plants. We have already lost nearly 70 percent of the scientists and designers—a gold fund.

Yes, it is very difficult for us. But we do not want to be in the role of a suppliant. Many enterprises are capable of not only "remaining afloat" but also of assisting Russia's economy. The main thing is that they are not interfered with.

[Badurkin] But the state is doing what it can to help. Recently, a law on conversion was finally adopted and significant resources have been allocated for it...

[Gladyshev] You know, it seems to me that both we and Russia's bold young people have once again placed the cart before the horse. The state's military doctrine has still not been developed and it has not been determined from whom and what forces to save, the priority directions of weapons development have not been designated, and the required mobilization resources of the economy have not been calculated. Then—there is a law on conversion. It is empty, not based on anything, and therefore—incompetent.

We have categorically objected to it, we have developed an interim provision for this year and we have proposed developing the future law's operating mechanism in it. We should not resolve such important state problems in vain. Those same Americans, at whom it is now customary to look, think that conversion must be no more than five percent per year. If it is more—the state reimburses the enterprise for losses. And we have once again launched the next campaign.

Now as for money for conversion. According to our calculations, nearly \$150 billion will be required. The introduction of tax advantages for converting enterprises could be one of the directions to the solution of this problem. In this case, a large part of the profit would remain at the plants in special conversion accounts that stimulate and finance the increase of consumer goods production. The government has created a fund in the

amount of 50 billion rubles and has distributed it by regions. As a result, already today R19 billion has "vanished" and has not reached the plants.

I do not think that the ministry of the economy and the Central Bank of Russia foresaw this finale. The question instinctively arises: but hasn't this been done consciously in the interests of commercial structures?

Meanwhile, the defense industry is quite capable of assuming responsibility for a significant, even the primary, share for financing conversion.

[Badurkin] At the expense of hard currency income from the export of weapons?

[Gladyshev] Of course. We are ready to trade much more effectively than the state does this today.

Largely thanks to the state's sluggishness, today we have lost three-fourths of the sales of defense products. Income from sales have fallen from a stable \$12-13 billion per year to \$3.7 billion. Our competitors instantaneously filled the vacuum and have begun to obtain a good profit. By way of illustration, the United States has doubled its weapons exports during this time and earns up to \$25 billion for them.

The laws of the world weapons market are strict. If you haven't been on time, you have lost. Right now they have begun to work against us in a big way. They are doing everything to prevent us from getting back into the market.

A characteristic example is the American Patriot anti-missile missile. Right now the entire world is confident that they successfully shot down our SCUDs in the Persian Gulf. But few people know that SCUDs are the forefathers of modern missiles. And there's more. While viewing the films of the combat use of the Patriots, we were amazed at how low their effectiveness is. But the noise and the advertising! Well they know how to do that and we are learning more and more from them all the time. Our S-300 suite is significantly better and "Tor" doesn't have any competitors at all but only narrow experts know about them in the world.

The way we are selling weapons today is bankruptcy. While placing iron on the market, we are not at all involved with intellectual exports—the commercial sale of defense systems and their maintenance service. And this is more highly valued and could bring Russia up to 30-32 billion "greenbacks" per year—much more than the creditors have promised us.

A structure has developed which is consuming itself. Last year, I signed a contract in one country to provide maintenance for an anti-aircraft missile brigade for 14 months. We were able to obtain \$5.7 million to do just that instead of the customary million. And guess what? The contract still remains on paper because, in the event of its fulfillment, we would have had to reduce by half the staff of our military specialists in this country—they have simply turned out to be unneeded by anyone.

[Badurkin] Let's return to our domestic problems, among which the disruption of economic ties between enterprises as a result of the collapse of the Union occupies far from the last place. How has this been reflected in the defense industry?

[Gladyshev] In the most ruinous manner. Judge for yourself. They make the MIG-29 in Moscow but the missiles for it in Kiev. Compressors for refrigerators are made in Kharkov and Latvia and radio parts in Armenia.

The defense industry was always differentiated by the fierce discipline of deliveries. But today it is total anarchy. Therefore, we have been compelled to create duplicate production in Russia. Of course, this is a band aid solution and our traditional suppliers are offended. But what can you do?

In the process, the main thing is not to break off once and for all the threads that tie us. Cooperation must be preserved, albeit at a lower level. Sooner or later everything will settle down. I am convinced of that. No matter what the politicians say, the economy always retains the last word. It is the foundation of any relations. If we destroy it, everything will collapse. Both the left and the right, the democrats and the autocrats will find themselves under the debris.

Already today many republics of the former Union have once again been drawn to each other. Even the Baltic states do not want to be isolated in this sense. We have already established productive cooperation with the defense enterprise of Byelarus, Kazakhstan, and Uzbekistan. And this is mutually beneficial cooperation.

[Badurkin] And the last question, Vladimir Ivanovich. What goals have the plant directors pursued, having formed the Russian League of Defense Enterprises in October 1991? How will it help conversion?

[Gladyshev] The goals were and are purely economic: to preserve the scientific and production potential of the enterprises and the backbone of the workers' collectives, and to stabilize and raise the economic level of plants in the future.

The league is social and not dependent on any organizations. They wanted to link us to the government from the first steps, but we did not want that. We work with the trade unions in the plants because we have common goals and tasks.

The league wants, can and will help all enterprises interested in cooperation. And not only defense enterprises.

Conversion Problems of Sosenskiy Industries

92UM1221A Moscow IZVESTIYA in Russian 4 Jul 92 Morning Edition p 3

[Article by Otto Latsis, IZVESTIYA: "Conversion Troubles: The Hardest Thing Is To Do What You Do Not Wish To Do"]

[Text] I do not believe the unequivocal explanations of economic processes. I do not believe in magic recipes for solving complex problems. Politicians who represent social development as being something simple and easily manageable either themselves are stupid or consider those around them to be fools. But sometimes one suddenly is lucky to run across a classically graphic situation, a "small picture to explain large questions," as the leader of the world proletariat successfully expressed himself at one time, and many phenomena of our life, from the emptiness of shelves and miserliness of pensions to the insanity of parliamentary battles are illuminated with new light.

"We Are In a Deep Hole"

The city of Sosenskiy, familiar to few beyond the nearby Kaluga environs, cannot help but startle one at the first acquaintance. You will drive through Kozelsk, an "evil city" for Batu's horde, mentioned in annals a year earlier than Moscow, now an ordinary rayon center of modest means with all its rich history; you pass Optina Pustyn, being revived with wonderful swiftness but not yet hiding traces of the monstrous ruin of recent times when there were vocational-technical school workshops in the temples; you will see Shamordino, a pearl of nature and architecture, befouled in the very same way as Optina but much more difficult to revive; and within several kilometers a purely capital microrayon right here among the parted pines. A crane next to the latest nine-story apartment house being built, another crane by the enormous building of a future hospital, a sprawling Palace of Culture, and the buildings either of a plant or of an institute, shining with glass. Where did such a thing come from in an ordinary Russian province?

But this is not an ordinary province, it is an island of the military industrial complex archipelago. Not the largest and most famous, but resembling the majority of islands of the mighty archipelago in one thing: people here are accustomed to living not like everyone around them live, and they have become accustomed to believing that they have the right to this. A bust of Pilyugin in the courtyard beyond the entrance gate and a portrait of Yangel—the leading figures of missile-space engineering—in the chief engineer's office seem to personally certify that you have ended up not just anywhere; you have to understand. Here the very walls help understand those who perceive what is happening today not simply as an economic or even social difficulty but as an outrage upon a holy thing, to which there could be just one answer: reject angrily.

"Like the overwhelming majority of other enterprises, we are in a very deep hole," Arnold Spivak, chief engineer of the Sosenskiy Instrument Plant, began his story that way. Then came something familiar from hundreds of similar meetings and from the pages of newspapers: about the threefold curtailment in the basic (defense) order, about increased prices of set-making parts, about nonpayments. One who hears such speeches knows that all this is true, but how can one find out whether or not it is all the truth? For it has been known

a long time that whoever wishes to perform the task seeks an opportunity and whoever does not wish to, seeks an excuse.

It must be explained that I arrived in Sosenskiy directly from the neighboring Kozelsk Machinery Plant—an ordinary plant, not a defense plant. It was "in a deep hole" three years ago without any conversion problems simply due to poor management. The collective itself called in a new director, Aleksandr Poluektov; by the way, at that time he was working at the Sosenskiy Plant, and in a very modest position. After arriving at the machinery plant, he dragged the plant out of the hole in two years. The present shock also did not bypass him—the very same card file of nonpayments and stopped-up sales. And Aleksandr Sergeyevich sees the future soberly:

"If Gaydar has it his way, there will be bankruptcies and unemployment. If the new vice premiers from the directors stop him, hyperinflation will begin."

But he immediately clarified:

"Gaydar is doing everything correctly."

Poluektov was conversing calmly, did not complain about an absence of help and, judging from everything, seriously intends to extricate himself through his own efforts. Therefore I tried to elicit now from Spivak what kind of way out he saw. He turned the question around this way and that, but the answers reduced to one thing: preferential loans. They already had received R11 million from the state and another 35 million were promised, "but at least 100" was needed. Specifically a preferential three-percent loan was needed—the credit of around 80 percent annual interest accessible today is unsuitable.

Was it necessary to explain what the chief engineer certainly knows himself? On the one hand, the coffers are empty; this is an objective reality left as a legacy for present authorities from the previous ones. On the other hand, inflation now is moving at a level of at least 20 percent per month. This means almost a ninefold devaluation of the ruble in a year. Under such conditions credit even at 80 percent annual interest essentially is a gift for the person who turns over money only a little. It seemed to me my companion had to realize the shakiness of the position he had adopted: the defense industry, which had exhausted the state's energy and sucked in the better part of national wealth, is demanding that a society ruined by its excessive expenditures now take it and support it. Do they propose turning a national mistake into national suicide?

I explained to myself the nervous outburst with which Spivak's speech ended as being uncertainty as to the reliability of arguments being set forth by the chief engineer: he suddenly declared that he had heard somewhere they were giving 200 grams of bread per person for coupons and that this reminded him of the Leningrad blockade which he had lived through—that is what the reformers had brought the country to. Only the following day I learned that the plant's financial difficulties were not the only reason which could disturb the chief engineer's emotional equilibrium that evening. The next morning he was to appear in court in the ticklish role of defendant, but he did not tell me this.

What the Loss of Temp Threatens

The war years had not faded from memory, and I could not accept Spivak's suggested comparison of today's life with life then, and especially with blockade life. But a scene which I saw on the following day specifically reminded me of the war. Three boxes were tossed right on the grass, a sheet of plywood was placed on them, and a person was sitting at this "desk" and using a small brush to neatly apply a protective coating to instruments which had just been fabricated. That is how plants thrown by the war from their own nests worked in the evacuation: initially there was a machine tool under the open sky, then walls and a roof grew up. On a sunny summer day of 1992 a worker of the Temp Design Enterprise was working under the open sky. It was not the war, but the Sosenskiy Instrument Plant administration, above all Director Valentin Subbotin as well as chief engineer Arnold Spivak, which had thrown him out of his own nest.

The Temp small enterprise essentially is a former department of the plant chief designer, and Temp Director Vladimir Liventsev himself is the former chief designer of the Sosenskiy Instrument Plant. By the way, his enterprise is not that small—80 persons of the highest qualifications, and before the havoc there were 130. The havoc occurred quite recently. Initially a group of small enterprises formed within the plant itself, headed up by the most energetic and qualified engineering cadres, basically chiefs of shops and services. Without demanding fantastic credit from the state and making use of their own knowledge and the physical facility which the plant had, they began putting out civilian products needed by the market.

It worked for them—was it not this that became the basis for the conflict? They revealed a secret to the world: the plant's transition to peacetime products was possible without great shocks, without delays, and on the basis of its own accumulation. It is not simple, not without losses, and one has to forego something, but the important thing is that it is possible. And this does not "break the back" of industry, as Spivak excitedly told me.

Perhaps there also was a conflict of plant generations—I do not know this, but the soil for possible conflict is obvious. Spivak's engineering career had taken place—he can recall to his final days that he worked with Yangel himself, he "stood at the sources." The younger ones—Liventsev and his department—were told to "accompany" others' designs all their lives at the provincial branch of the Moscow plant. Having organized their Temp, they proved that they could not only accompany, but also create their own.

The Elektropribor small enterprise, which was headed up by former shop chief Aleksandr Tishin, also appeared, as did the Elektrotehnika small enterprise and several like them. But from the start of the present year plant director Subbotin suggested "reorganizing": small enterprises which he himself instituted as part of

his plant were to be transformed into "firms." The essence of course is not in the name, but in the fact that in place of their own current account, Temp and the others were told to retain only subaccounts and pass all their incomes through the general plant "pot." Meanwhile, as the Kaluga newspaper PROVINTSIYAINFORM announced, last year Temp found three-fourths of the work for itself through outside orders. These orders could not be obtained through the plant: its overhead expenses were ten times higher than for Temp; at those prices you could not find a buyer.

The small enterprises refused to give up the freedom they had won. They verified that even having rejected institution of enterprises, the plant has no right to rescind the lease contract, and its period runs another four years. Then the insubordinate ones were shown the door: from now on, plant production spaces were closed to small enterprises. Plant orders to that effect required some kind of substantiation, which was sought for a long time. They accused Temp of misappropriation and some kind of other sins. The clumsy stitchery was obvious with the unaided eye: an enterprise is not evicted for misappropriation, but a criminal case is instituted. The plant was openly taking advantage of the right of strength. Temp countered this strength with rights: Liventsev filed a civil suit, demanding that the nonsense be refuted. The court obligated Spivak to apologize and pay R3,000.

Alas, a moral victory does not change material circumstances. Temp has been turned into an implausible enterprise scattered around the city in three places: wherever there is a room or two, in clearly nonplant premises—school or administrative buildings. The designers are without drawing instruments and sit at some kind of school desks. Workers are without anything resembling workstations. Descriptions of Zlin, a city where everything belonged to monopolist Bata, crept into my head. In Sosenskiy everything belongs to the plant. Like other small Sosenskiy enterprises, Temp can count only on the help of city authorities, but very little belongs to the city itself. No matter how city administration head Aleksandr Stefanov tries, he can offer Temp only unadapted, sometimes half-demolished premises.

A mine is the most grandiose of them. The fact is that the environs of Kozelsk already are going through the third conversion in the last 40 years. In 1952 the intentions here were to turn a peasant region into a mining region. Of course, a market economy would not permit such foolishness: with all the expenses for bringing it in. Kuznetsk coal is cheaper than Donetsk coal now even in the Donbass. But the suburban Moscow half-coal, half-earth never repaid expenditures for its production. But expenses never were counted in an economy turned into a general distributor. Nature closed the mines: the reserves soon were exhausted.

Then they decided to build a plant in Sosenskiy in order to give work to former miners. That was the second

conversion. The present, third one, could be the easiest, for the instrument makers remain instrument makers. It could be...

In the years without a proprietor the abandoned surface structures of the former Kozelsk mine have been utterly ravaged: window frames have been ripped out and the floors have been stripped. After receiving the skeletons of the buildings, the new settlers showed what a person who wants to do something can do. There is the slag dump of the mine boiler room: already they are pressing building blocks, a popular commodity for financial support. There are the waste wood materials of neighboring sawmills: the former mine is putting out wall beams, and there is a run on the commodity. No, their high qualifications have not been forgotten: the ravaged premises are being hastily restored; Elektropribor assemblers already are soldering their products in them, and Temp designers are working on the second story. Well then, is everything being straightened out?

"Something is being straightened out," responds Elektropribor director Aleksandr Tishin, "but we are losing tempo. Here we have to cover the entire path of initial accumulation and for now we are working on one knee, while next door the capacities of a modern plant created by our own hands are standing empty. And of course much of what our designers are creating will be impossible ever to produce at the mine."

I saw a model of such a product being developed: a monitor for monitoring several parameters of the condition of patients in a pressure chamber. It also will be possible to use it in reanimation—it will immediately inform the physician about a deviation of parameters from the norm. Temp can develop it, but not produce it. But the plant in Sosenskiy could also produce it. I recalled how in our conversation the day before Spivak complained that last year an agreement with the Italians for joint manufacture of an apparatus—also a medical one for heart operations—was disrupted. The Ministry of Health did not find the eight million dollars for its share of the joint venture. I will not begin to compare absolutely different apparatus either in medical importance (although are patients insignificant?), or in technical complexity of manufacture. But they are easy to compare for one economic parameter: neither Italians nor dollars are needed to produce what Temp is developing.

What Remained in Memory

Perhaps Temp did not oblige with this? It is of course an interesting mystery as to why Sosenskiy plant leaders, who had created the small enterprises themselves, also were destroying them themselves. Simply personal ambitions? Perhaps that too. The young plant engineers achieved a transition to civilian products three years ago and now everyone can see that they were right. A bitter triumph. At that time this would have been a thousand times simpler. And if at that time the defense order had been reduced severalfold throughout the country as they have done now, there would not have been financial

bankruptcy of the state. But three years ago the plant heads gave the assurance that no conversion would be required: they would have a talk and the past would return. Perhaps they in turn were assured of that by ministry heads? God knows. We will wait to see whether or not Oleg Baklanov, former director of all the defense industry, enlightens us in court as to why he joined the State Committee for the State of Emergency. But for now we will limit ourselves to the words of one of the Temp associates, quoted in the newspaper PROVINTSIYAINFORM: it is asserted Subbotin himself said at a meeting in the presence of others that he had met with director friends and it was they who advised making the "perestroyka in reverse."

I was given to understand by Spivak what kind of friends are chosen for advice by heads of the Sosenskiy plant. He handed me some kind of papers at parting, but about this later. First about the "big questions" which the "little picture" in Sosenskiy helps clarify.

I have to admit I was thinking that in their policy the government and Central Bank had "over-squeezed" the "difficult money" that was generally needed with any normalization of the economy. Shortage of working capital and nonpayments—the industry experienced all this in the transition to the New Economic Plan at the beginning of the 1920's. Easy access to money deprives one of motivations for work, the salesman loses interest in the customer. An economy in which everything except money is scarce inevitably destroys itself. But has moderation been observed in the desire to overcome the situation? Did everyone in succession have to become insolvent? Obviously not. But the conversations in Sosenskiy lead me to the thought that perhaps someone should not be given even the smallest credit cushions. It is impossible to divide credits according to the principle of "a little bit for everyone." There is not enough for those who are seeking a load, but those capable of sinking others who are working remain afloat.

By the way, today's reality of Sosenskiy also evokes many other analogies with the New Economic Plan. Temp and others recently founded an association of small enterprises. It centralizes certain services such as legal services and, most important, marketing. The experience of voluntary associations of the 1920's is being recreated, although people in Sosenskiy barely heard about it: they are moved not by knowledge of theory, but by the logic of life. But does this logic not confirm that small enterprises are dying to be free in vain, because all the same, they themselves have to consolidate into something large? No, it does not confirm this. Here it is all a matter not of the size of enterprises, but of the hierarchy of relationships. The association executive board of directors is subordinate to its members, to the small enterprises, while the Sosenskiy plant board of directors wants to have them subordinate to it.

And now about the papers left as a souvenir. Spivak handed me an address of a conference of heads of

defense enterprises, an open letter and, moreover, also a separate sheet titled with refined simplicity: "Demands." The key word in all papers was "We demand." For example, they demand payment for labor as a minimum one and one-half times higher than in the budget sphere, i.e., from physicians who treat them, from teachers who teach their children, and from servicemen and policemen who protect them.

I remember once physicians in turn demanded payments one and one-half times higher than in the nonbudget sphere. But physicians specifically should demand: an employee on the public payroll cannot increase income through his own efforts unless he takes bribes. But here those who are called upon to create physical assets—the basis of incomes of all society—are demanding guarantees. Then they also demand indexing, compensation, and a tax reduction, all from the state budget. Well, the directors cannot help but know that the government is not holding a bag with billions under the table. To demand from the budget knowing that the coffers are empty means demanding taking from others to give to them. It is also possible to take that position, but then do not write in those same papers how difficult it is for the people to live.

Knowing nothing about Spivak's "souvenir," Liventsev also presented a bundle of papers at parting—information about articles and developments being offered by the Temp enterprise: a medical monitoring device for pressure chambers, a unit for automated ultrasonic monitoring of the weld quality, a unit for monitoring the quality of food products, indicator panels for operating a diesel locomotive, a panel for controlling the operation of a hot-water boiler, and so on. So this is the small picture: some demand giving to them, others offer to have things taken from them.

Thinking over what was seen in Sosenskiy, I cannot help but sympathize with Spivak. The concerns which surround him are no joke and one cannot help but be annoyed when industry has to pay for the innumerable mistakes of governments which have replaced each other. But one also should not forget the mistakes of the plant leadership. I suspect that people do not wish to sit in two chairs at all, putting out civilian products and at the same time preserving the capability for producing missile-space equipment. But one cannot help but admit that the superpowerful missile shield not only protected us, it also sapped the country's strength. It is terrible to see how the past with which your entire skin has knitted is crumbling. But the danger of undermining the future with concerns for the past is even more terrible.

Conversion Disaster in Penza Oblast

92UM1246A Moscow ROSSIYSKIYE VESTI
in Russian No 22, 25 Jun 92 p 3

[Article by Yuriy Kotler, under the rubric: "Conversion": "The Extreme Is Once Again the Director"]

[Text] We have beat swords into plowshares and, think, we have successfully resolved the first problem of conversion. Now, the second problem has remained: What to do with all of the rest—what do we beat the cannons, tanks, aircraft, computers, and many other things into?

A whole series of military-industrial complex plants are concentrated in Penza Oblast. All-Russian conversion has totally affected them.

"The situation is simply catastrophic," said Oblast Deputy Head of Administration Viktor Cherushov. "So far practically the oblast's entire scientific-production complex has depended upon defense enterprises. What is occurring right now is so serious that we can't imagine what to do."

As they assert at the oblast administration, a conversion program exists in the oblast. The primary idea of the administration's program is obtaining credits in the amount of 700 million rubles to conduct conversion in the oblast.

"Individual enterprises have managed to obtain insignificant credits," continued Viktor Cherushov. "But that is clearly inadequate."

According to economists' calculations, the decline in production in the oblast in 1992 will total R2.8 billion and unemployment for approximately 20,000 people is being predicted.

In order to somehow save the situation, the administration is preparing a decree on the creation of an outside-the-budget conversion fund: so far it's unclear where the money that will enter this fund will come from.

Imagine ideally clean rooms, workers in white smocks and gauze bandages who are working in air that contains practically no dust (special sensors track that). You enter the shop in street shoes and you stop production. That is what the dying "VEM" Plant looks like—Penza Computer Equipment Production Association.

And it is dying because it previously produced the Elbrus-2 supercomputer and was preparing to produce the Elbrus-3 super-supercomputer. Three years ago, the censors would have crossed out these lines. Now these are different times. Because they have removed from the plant the order for Elbrus-2 and for development of Elbrus-3 and it is preparing to produce microwave ovens. The plant had major customers—the KGB and the nuclear power industry and now the customers will be a bit smaller—simple Russian homemakers.

"Conversion caught us all unaware," said VEM General Director Pavel Petrash. "We are already in the second year of a difficult situation. As a result of conversion, the most powerful computer of the former USSR (125 million operations per second) has been removed from production. Just one test suite for comprehensive testing of the computers costs R100 million in current prices. We are being forced to disassemble it and sell it piecemeal."

As a result of conversion, in 1992 VEM lost R233 million—more than 50 percent of the plan. Attempts to readjust production for the output of parts and devices of a broader profile have thus far been unsuccessful.

Having waved goodbye to the military-industrial complex, VEM leaders established contact with the Italian firm DeLongi that specializes in the production of gas stoves, microwave ovens, vacuum cleaners, electric coffee makers, irons, and similar items. In February 1992, a contract worth \$4.5 million was signed between DeLongi and VEM and approved at state level. According to the terms of the contract, Vneshekonombank [Foreign Economic Bank] is paying for 15 percent of its cost. Lines for the production of gas stoves (for which the Italians are delivering 13,000 kits) and microwave ovens (20,000 kits) will be installed at the plant. The first shipment of the new product should come off the production line at the beginning of July.

According to the VEM director's calculations, the microwave oven will cost approximately R12,000. He thinks that profits will total R150 million in 1992. In other words, they will be able to cover all of the losses from conversion with the profits from the manufacture of storage units and home appliances, according to the general director's words.

The only problem is that VEM is borrowing money. So, a loan of \$2 million was taken for the production of the stoves. It will be very difficult to repay it. The price of R12,000 will never permit them to cover expenses since all of the parts are supplied from abroad and only their cost is already much higher. They will have to either drastically increase prices or sell the stoves abroad; but they have enough of them there. The only thing they can hope for is a sharp drop in the exchange rate for the dollar with regard to the ruble (as the Government has promised us).

We can also add to what has been said that the main postulate of cadre policy at VEM is: "We will not permit a reduction." And this is when less than 60 percent of the workers are fully employed at the plant. Of course, we need to wait until the end of the year, as the plant's general director says, but it is certain that hard times are only beginning at VEM. They will have to repay the debts.

The Belozavod and, completely, Penza Production Association "Plant imeni Frunze" (ZiF) is the oldest and largest defense plant in the oblast. More than 20,000 people work at it.

Of course, if you call belozavod a defense enterprise, it can cause quite understandable bewilderment. And nevertheless bicycles are what is keeping ZiF afloat. Moreover, the plant produces nearly one million bicycles per year and is the first belozavod in the CIS based on production volumes.

Ill-wishers will say that ZiF has remained alive for a very short period of time and that dangerous production

innovations and experiments will lead to no good and production will completely collapse. But then again, the people who are joining the economy and entrepreneurship suggest that the economic "experiments" will help us to find a way out of the crisis.

"Everything began with 1990," said ZiF Deputy General Director for Economics Viktor Kurnayev. "The government authorized four defense plants, including ours, to operate under lease conditions. Then they prohibited some sectors, including ours, from operating under lease. We managed to prove that military-industrial complex enterprises can operate under lease although, naturally, with a number of specific features. Later the creation of a joint-stock company became the primary idea of the leaders."

But soon based on the demand of the representatives of a number of shops, the issue on stopping the process of becoming a stock company was submitted for discussion as a result of the instability of the situation (both at the plant and in the country). And the transformation into a joint-stock company was temporarily halted by a majority vote.

Here we need to make a number of clarifications which will help you to understand just what is happening at ZiF.

Two rallies, the first—a city rally and the second—a plant rally, that merited the attention of the local press, occurred in Penza prior to the workers' collective decision on ceasing to become a joint-stock company. Oblast trade unions conducted the city rally with the goal of "protection of socio-economic rights under conditions of market reforms." The casting shop "was restored" at the plant under the leadership of Shop Chief Aleksandr Filimonov. While demanding the retirement of the general director, Filimonov stated that he himself is entirely capable of managing the plant. A couple of days later, in a conversation with me, however, he generally denied his participation in the rally and stated weighty words on the most urgent problems. Many people at the plant suspect that they led the organization of the rally from the sidelines, although it was quite clumsily done.

The defense plant is least of all protected in the face of economic catastrophe, 100 percent of the state order, the veil of secrecy, and demands for uninterrupted production—all of this makes defense industry workers absolutely helpless and not ready for the market.

"We invested practically all of our money in the purchase of materials and equipment under the state order," said Chief Engineer Stanislav Blinov, "but it turned out that the customers did not have any money and everything is lying at the plants. And today our card file has R400 million. And R200 million in nonpayment."

Besides bicycles, ZiF produces wheel chairs, an apparatus for using natural gas in cars instead of gasoline, automobile spare parts, and mini-motorcycles. A number of contracts have been concluded with German

enterprises for the production of bicycle frames and washing machines based on Western technology.

In all of history, the most interesting figure is the general director, he himself is a product of conversion. There are two ways to survive. First, you can sit quietly and wait, something will happen, go with the flow, slowly, but relatively safely. But if you manage to get your hands on another \$2 million as VEM did, then that's fine. The second way is to begin working cleverly, to fantasize and improve the life of the entire plant. And make things worse for yourself. ZiF General Director—48 year old Aleksandr Rodionov also followed that path in 1989 but, while encountering unconditional support at all levels in words, Rodionov still hasn't received any real assistance.

That is what kind of polarized conversion is occurring in the very center of Russia, in Penza Oblast. Many experts think that the picture is quite characteristic. Characteristic of what is occurring at VEM and also characteristic of what is occurring at ZiF. With the small difference that the difficulties and opposition increase as they deviate from accepted socialist norms. Today major enterprises are on the verge of devastation and ruin and the directors of major enterprises remain, and this sounds very strange, totally defenseless. The plant is ruined and the director is at fault. The director begins to do something in order to prevent destruction—he is doubly at fault. And if he attempts to think of something new to extract the enterprise and to give it new life—he is three times at fault and he does not have any mercy whatsoever. And that is when the director corps is one of the most important components during the transition to market relations.

But we would not like to end this article with appeals to the Government where, they say, see, we need to urgently take steps, etc. Obviously, we need to reconcile ourselves to the fact that we at the state level are continuing to destroy military production.

But while destroying the military-industrial complex, we need to manifest maximum concern about those plants that are still ready to work, having preserved some sort of potential and are ready to maintain and not destroy Russia's economy. But they and their directors also need support.

DOCTRINAL ISSUES

A Scientific Discipline—Combat Systems Theory

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[Article under rubric "Experience, Opinions, Advice" by Captain 1st Rank E. Shevelev, doctor of military sciences, professor; Captain 1st Rank N. Kharlamov, candidate of technical sciences, docent; and Captain 1st Rank A. Lugovskiy, candidate of military sciences]

[Text] Any war (armed conflict) has its inherent character based on the most typical traits of military operations and features of employment of Army and Navy forces, which depend on quality of weapons and combat equipment and the preparedness of personnel. At the present time the nature of armed conflict is sharply changing because of a number of objective factors. A sharp growth of offensive and defensive capabilities of formations and large strategic formations of Army and Navy forces due to the massive entry of more sophisticated weapons into the inventory should be named as one of them.

Calculations show, for example, that even if war is waged only with conventional weapons, with U.S. implementation of programs in the Army (Army-90), Air Force (Air Force-2000) and Navy the combat capabilities of Army and Navy forces will grow tens of times. Use of advanced conventional weapon models will be equivalent to the effect of employing tactical nuclear weapons. The sides' capability to deliver precision weapon strikes against chemical industry enterprises and atomic electric power plants situated in the interior of enemy territory can lead to serious consequences even if only some of the assigned targets are destroyed.

It should be emphasized that such important characteristics of conventional weapons as fast response and accuracy are upgraded simultaneously with a sharp growth in their potential. Division fire planning time was reduced from two hours to two minutes with the entry of the TACFIRE automated field artillery control system into the U.S. Army inventory. Reconnaissance-strike and reconnaissance-fire complexes (such as Assault Breaker and PLSS) will have even faster response. These systems permit detecting and classifying enemy targets, issuing target designations to appropriate weapons and delivering accurate strikes against the targets (including small, moving targets) in real time. Weapons are becoming multipurpose in their tasking.

The development of new troop employment concepts became another reason for a change in the nature of armed conflict in ocean, sea and continental theaters of military operations. These new concepts provide that with maximum realization of the groupings' combat capabilities, the full depth of the enemy's operational alignment will be pressured from the very beginning of the war. U.S. and NATO specialists believe that successful air-land and air-sea operations are possible only when a force grouping put into action employs all its available systems of precision guided weapons, other weapons and EW equipment with maximum effect and strictly coordinated by goal, place and time.

Comprehensive integration of reconnaissance equipment, weapons, ECM equipment, and equipment for command and control of forces and weapons into unified systems at the level of formations and large strategic formations is given an important role in this connection. The essence of this measure is to ensure continuous.

coordinated action by personnel and equipment conducting reconnaissance and collecting and processing information, and to rapidly communicate data to interested echelons of weapons and EW in order to make optimum decisions.

Under such conditions armed conflict represents a process where complex, open, developing, dynamic operational-tactical structures—the opposing sides' combat systems—exert a mutual effect on each other. We will take note of certain distinguishing features of the "combat system" concept:

- it is an integral formation being created based on a grouping of Army or Navy forces, reconnaissance, target designation and EW equipment, an automated command and control system, and other support systems by organizing coordination among them (it should be borne in mind that the system's functional properties are inadequate for the sum of properties of elements included in it); it is capable of changing its structure and purpose for functioning depending on situation conditions;
- the goal of creating combat systems under conditions of implementing defensive doctrine is to prevent enemy effect on force groupings and installations on friendly territory and on the territory of allied countries, force him to give up aggressive plans, and if necessary disrupt the functioning of his combat systems;
- the combat system is hierarchic; each of its components is a complex system performing a particular mission, while it represents a component (subsystem) of an even more complex combat system (supersystem). The combat system is controllable with respect to the supersystem and controlling with respect to its subsystems.

Uniqueness, poor predictability of behavior, and purposefulness are inherent to combat systems. In fact, no combat system has full analogues of behavior inasmuch as any Army and Navy force grouping is headed by its own commander and staff. The poor predictability of its state (behavior) is explained by the fact that as a rule it functions under conditions of abrupt situation changes. Within certain limits the system is capable of reducing and preserving the uncertainty of its state, retarding it when there is an unfavorable external effect, and attaining achievement of a specific goal. An important feature of combat systems is their openness, which lies in the possibility of external enemy effect by weapons, in an information (controlling) effect on the part of its own supersystem, and in interworking with other combat systems in the process of its functioning.

Reconnaissance-strike and reconnaissance-fire complexes are an example of the simplest combat systems on a tactical scale. Their capabilities substantially expanded thanks to integration of weapons, reconnaissance equipment and automated control systems. In the opinion of foreign specialists, with the massive effect of attack systems it is possible to destroy a considerable portion of

enemy targets and defeat individual groupings of his forces even before making contact with him and before committing friendly forces.

Cardinal changes should be expected in the nature of armed conflict after combat systems of an operational and strategic scale appear on opposing sides. According to foreign press reports, basic efforts of the U.S. and NATO military leadership are specifically directed at this. It is believed that by the year 2000 an operational system will be able to issue data on an overall number of targets (3,500-4,000 targets for 1,200 strike aircraft) at the level of European theaters of military operations in one minute. They are also considering a procedure for centralized decisionmaking providing for engagement of targets by a large number of offensive weapons in short time periods. They substantiate the advisability of creating a unified, integrated combined-arms system in which not only reconnaissance equipment, weapons and EW equipment, but also tactical command and control equipment would interface.

Just what is needed to offer realistic resistance to the enemy under present conditions? A new scientific discipline, combat systems theory, is called upon to answer this question. It considers the following problems: out of the aggregate of forces, equipment and installations for various purposes assigned for an operation, how to create a combat system capable of opposing an enemy system and promptly affecting it to disrupt functioning; what features it must possess for performing assigned missions; and what its makeup, structure and functioning modes are. The direction in which armament systems, combat and technical means for various purposes, and the table of organization structure of Army and Navy forces should be upgraded in order to create combat systems capable of opposing future enemy systems also is analyzed.

Systems-oriented, balanced Armed Forces development aimed at creating combat systems capable of successfully opposing future enemy systems is becoming a very important parameter of Armed Forces organizational development at the present time. Based on this it is necessary to radically change the content of the "arms development" concept which has formed over decades. It was envisaged that creation of any means—tank, aircraft, submarine, surface ship, radar system—is the primary object of preliminary specifications, designing, testing and evaluating. The principle that each new model must be more sophisticated than the previous one was considered fundamental. Such an approach is called "ascending, straight-line arms development."

Not the means, but the goal which must be achieved holds the priority position in combat systems theory. Therefore the combat system called upon to perform the mission assigned it must become the starting point in researching problems of Armed Forces organizational development. This would allow precluding the possibility of including materiel in projects (programs) that does not meet modern demands and also would allow

radically altering the approach to evaluating priorities in Armed Forces organizational development. Not only an even distribution, but any distribution of expenditures among branches of the Armed Forces and allocation of the bulk for developing offensive weapons will become unjustified if this does not provide for creating corresponding combat systems and maintaining their necessary regime of functioning. For example, it will be inadvisable to have the most sophisticated ship if she cannot be employed in presently existing complex forms of military operations on the sea and ocean.

In viewing the means of warfare they are creating as elements of combat systems, specialists of design bureaus and defense industry enterprises will be able to do purposeful work to give these systems necessary functional properties. This will increase the military-economic effectiveness of new weapon and equipment models, but it would be a dangerous error not to see the difficulties arising in that approach and the incentive that corresponding ministries, departments, design bureaus and plants would have for an ascending, straight-line development of the production that has been developed and of the manufactured products, as well as not to take into account the complexities of organizing their joint functioning for a unified end result.

The first step on the path to a systems-oriented, balanced development of Armed Forces could be to accept the requirement for strict fulfillment: the request for development of any weapon model envisages that it is a component element of a combat system; the general designer of the corresponding combat system should be the principal character in creating and deploying any weapons, ships, submarines, tanks and aircraft. It should be noted that the interrelationships of ordering entities with design bureaus and defense industry enterprises should be not simply revised, but radically changed. Combat systems capable of successfully opposing future enemy systems must be the end result of their joint activity.

Upgrading the operational and combat training of large strategic formations, formations, units and subunits under present conditions consists of rehearsing their employment as part of combat systems on a strategic, operational and tactical scale. The capability of commanders and staffs at all levels to rationally use functional properties of combat systems being created becomes a very important qualitative parameter for employing Armed Forces in peace and wartime: in peacetime to force the enemy to give up aggressive plans and actions; and with the onset of war, to disrupt the

functioning of opposing combat systems by affecting their most vulnerable elements.

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MILITARY CONFLICT, FOREIGN MILITARY AFFAIRS

Could Iraq's Air Defense System Hold Out?

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[Article by M. Aleksandrov and S. Vladimirov: "Could Iraq's Air Defense System Hold Out?"]

[Text] The multinational forces' (MNF) use of diverse, super-modern weapons, above all aviation, played a decisive role in gaining a quick victory over Iraq.

The MNF air attack force included 1,677 aircraft of various types—from B-52G and F-111 strategic bombers to the latest F-117A Stealth fighters. A total of 2,790 aircraft were concentrated in the theater of military operations and performed the following missions: high-altitude bombing of concentrations of troops and military equipment; air defense; winning air superiority; isolating the area of combat operations; air defense suppression; direct air support, reconnaissance, and electronic warfare.

Taking into account Iraq's powerful air defense system*, U.S. military experts predicted friendly aircraft losses as high as 10 percent during the campaign. Therefore, the MNF command carefully planned measures for training pilots in penetrating air defense zones and also operations for electronic warfare, effective engagement of anti-aircraft weapons, combating fighter aviation in the air and at airfields, deception, and using commando raiding forces.

The wide-scale reconnaissance measures conducted in advance and which continued during the war were also very important to the future successes of the MNF aviation. These measures gave a complete picture of Iraq's air defense system and the particular features of its functioning. Having at its disposal reliable data on the nature and particular features of upcoming operations, the leadership of the U.S. Air Force, Navy, and Marine Corps made the appropriate adjustments to pilot training programs at Desert Flag exercises. During the course of organizing exercises in the fall of 1990, officers visited Saudi Arabia. The area chosen for conducting the exercises was the training range at Nellis AFB, Nevada, whose desert territory is comparable in area to the territory of Kuwait.

The majority of the 1,400 antiaircraft weapon mockups concentrated on the training range and planned for simulation under the exercise scenario were improved to achieve maximum similarity to the Iraqi originals. Their placement at positions corresponded to the actual disposition of antiaircraft systems on the territories of Iraq and Kuwait. Thus, they used copies of Iraqi radars, castings of SA-6 and SA-8 radars, and also mockups of Bar Lock, Spoon Rest, and other acquisition radars, batteries of 57-mm antiaircraft guns, and ZSU-23/4 mounts. In order to make the situation as close as possible to a combat situation, they continuously tracked and documented on video and photographs the results of launches and firings by both sides with subsequent elimination of "shot-down" aircraft and damaged air defense weapons from further participation in the exercise.

The American command authorities devoted much attention to finding a way to neutralize Iraqi aviation in the air. The actions of the Iraqis in the war against Iran were analyzed most thoroughly and the tactics of the Soviet, Egyptian, and Indian air forces were studied, since the military advisers of these countries were involved in training Iraqi pilots. The fact that a number of Iraq's pilots trained in France was also taken into account.

The exercise participants became very familiar with enemy aircraft and tactics. They conducted "air-to-air combat" with French Mirage fighters, which are in the Iraqi Air Force inventory. In addition, practice duels between MiG-29 fighters and F-4 Tornado aircraft were conducted in Germany, which made it possible to discover the advantages and shortcomings of the Soviet aircraft. Approximately 90 aircraft from 12-17 aviation units participated in the Desert Flag exercises each day. The course of instruction lasted two weeks, and then there was a change of personnel. Two pilots were assigned to each aircraft: a pilot flew one sortie each day, while the aircraft flew two. In addition to the U.S. Air Force, among the participants were tactical aviation units and subunits of the U.S. Navy and Marine Corps, as well as of aviation of countries of the anti-Iraqi coalition.

A total of about 22,000 aircraft sorties were flown during the Desert Flag exercises, which made it possible to provide each MNF pilot flight time equivalent to several of the first combat sorties. This approach, combined with making the situation as close as possible to the conditions of the theater of upcoming combat operations, ensured minimum losses in flying personnel in the war.

Coordination of the strikes, which for the first time were to be made simultaneously by cruise missiles and manned aircraft, was of special concern for the MNF command authorities. This was reflected accordingly in the exercise scenario. In addition, by the start of the

combat operations the leadership of the Navy had conducted additional exercises devoted to this problem, in which all flying personnel of carrier-based strike aircraft squadrons participated.

Thus, everything was subordinated to ensuring successful operations by strike aircraft crews who were to deliver bombs precisely to calculated points. The U.S. Air Force fighters providing cover could, if necessary, be replaced by U.S. Navy F/A-18 and A-6 aircraft. According to the drafters of the concept, such a tactic would lead to oversaturation of the information and target channels of Iraq's air defense system and make it "bog down."

The MNF aviation began preparing for war long before the start of combat operations. Flying personnel were given a fairly complete picture of Iraq's air defense, its particular features, the disposition of the main air bases, the capabilities of the Iraqi Air Force, and methods of combating it. In addition, direct preparation of flying personnel in the theater of upcoming combat operations began immediately after the first combat aircraft were transferred to Saudi Arabia.

Comprehensive round-the-clock reconnaissance, with the involvement of spacecraft, was conducted to collect information on the disposition of Iraqi troops and the characteristics of Iraq's air defense. All reconnaissance data was received at the Headquarters of the U.S. Ninth Air Force, which actually was the headquarters of the MNF air grouping. This information underwent computer-processing, was analyzed, and was used to create a general data base.

Counting on quickly winning air superiority, the MNF command authorities devoted paramount attention to the question of neutralizing Iraq's air defense. The plan for suppressing the air defense system called for priority destruction of SA-2, SA-3, and SA-6 surface-to-air missile systems and air defense command posts from low altitude, primarily using high-precision weapons (including the latest F-117A Stealth fighter-bombers) and Tomahawk sea-launched cruise missiles (SLCM's). The aircraft were to reach their targets at a very specific time, immediately after the cruise missiles, with widespread use of self-protection and group-protection jamming resources. After putting the air defense system out of commission, it was planned to seal off the enemy's fighter aviation on the ground with strikes against airfields. During the strikes it was also planned to create in the zones of antiaircraft fire three breach-corridors in the south and one in the north of the country. Thus favorable conditions were ensured for penetrating into the operational rear of the Iraqi Army and to important infrastructure targets deep in Iraq.

Preparing a large-scale electronic warfare operations became an integral part of the coalition's efforts undertaken to suppress Iraq's air defense. This task was given to EF-111 Raven and EA-6B Prowler aircraft, having

AN/ALQ-119, AN/ALQ-126, and AN/ALQ-131 jammers covering a frequency range from 64 MHz to 20 GHz, and EC-130H Compass Call aircraft, designed for jamming aircraft and air defense command and control nets. It was planned to use the EF-111A and EA-6B aircraft directly in the combat formations of the strike groups and the EC-130H and part of the EF-111A aircraft in combat air patrol zones outside Iraqi airspace and beyond the range of Iraqi anti-aircraft weapons.

Having an overwhelming advantage in EW assets, the multinational forces began intensive jamming several hours before launching their aircraft, which exhausted the radar crews, prevented them from creating a solid radar field, and disrupted state and military command and control systems.

To preclude a negative effect of the powerful electromagnetic emissions of EW equipment on the navigation systems of friendly strike aircraft, the MNF command authorities provided for the deployment of radio beacons on the territory of Iraq and Kuwait several days before the start of combat operations. This operation was carried out by special forces subunits of the United States and Great Britain dropped into the desert areas from an altitude of 10 km on gliding-type parachutes.

The combat operations began with an air offensive operation lasting three days, during which seven massive strikes were made. During each of them, a most important role was given to offensive air weapons which carried out the mission of air defense suppression, since they were the ones that determined not only the success or failure of each of the strikes but also of the air operation as a whole. The fact that EF-111A and EA-6B jamming aircraft comprised about 30 percent of the offensive air weapons in the suppression echelon draws attention. Aircraft losses were minimized thanks to such a massive use of EW assets. Otherwise, in the opinion of foreign experts, up to 50 percent of the aircraft might not have returned from the mission.

The lack of adaptation of allied aircraft EW assets to the Iraqi radars together with the European-made Roland and the American Hawk (six Hawk battalions were captured from Kuwait by the aggressor) air defense missile systems caused the U.S. Air Force command authorities certain concern. However, the Hawk system was not mastered by the Iraqi gunners and was not involved in the combat operations.

To ensure effective operations by the F-117A Stealth aircraft and create even more difficulties in their detection by enemy radars, EF-111A and EA-6B jamming aircraft preceded them to the strike targets. As a result, not a single Stealth aircraft was lost during the entire campaign.

Massive use of a variety of jamming resources by the MNF resulted in only about 10 percent of Iraq's air defense electronic assets being in operation by 23 January. According to certain data, only about 20 percent of Iraqi radars remained in service after the first 10 days of

combat operations. It is said that these were the most modern versions of the radars, which were in reserve and not used during the first, most powerful strikes.

As foreign press reports, fire suppression of Iraq's air defense assets was accomplished by F-4G and F-16/C/D aircraft, usually operating together, and also F-117A, F/A-18, Tornado IDS, and A-7 aircraft. AGM-45 Shrike antiradiation missiles, AGM-88 HARM, ALARM, ARMAT, SIDEARM, and air-to-surface guided missiles were launched and cluster munitions were dropped against anti-aircraft system radars and surface-to-air missile [SAM] launchers.

According to the suppression plan, priority was placed on destroying the not very mobile SA-2 and SA-3 SAM systems, fixed long-range radar detection posts equipped with P-14, P-12, and P-15 radars, command and control posts, and communications centers. This mission was given primarily to the F-117A Stealth aircraft from the 37th Tactical Air Wing operating at dusk and at night. On the first night of the war, their targets were the main headquarters of Iraq and other important installations in the center of Baghdad, and SAM sites covering position areas of Scud missile battalions in the western part of the country. The stealth aircraft attacked in pairs. The lead aircraft detected and illuminated the target with a laser beam and dropped a "smart" bomb on it. The wingman repeated the pass in the event of a miss or incomplete destruction of the target by the lead aircraft. As a rule, GBU-27 smart bombs were used here.

On the night of 17 January, 52 Tomahawk SLCM's were launched for the first time from American ships. One of them, experts claim, was shot down by Iraqi anti-aircraft fire, but the rest reached their assigned targets. Their targets were installations having heavy air defenses: not very mobile SAM systems, command and control centers, and nuclear, chemical, and bacteriological weapons production plants. In the capital, Iraq's Ministry of Defense, the Presidential Palace, and a communications center were destroyed by cruise missiles. According to foreign estimates, the probability of target damage by SLCM's was 85-90 percent.

The ATACMS surface-to-surface missile was tested as a weapon against anti-aircraft complexes; it destroyed an SA-2 site in southern Iraq.

(To be continued.)

Footnotes

Based on foreign press materials.

*Iraq's air defenses included: 20 SA-2 (S-75) battalions; 25 SA-3 (S-125) battalions; 45 SA-6 "Kvadrat" batteries; 50 SA-8 "Osa" SAM systems; more than 100 SA-9 "Strela-1" SAM systems; 60 SA-13 (modernized "Strela-1") systems; 13 Roland-2 tracked and 100 Roland-2 wheeled anti-aircraft missile systems; SA-7 "Strela-2M" portable SAM's; SA-14, SA-16, and Chinese HN-5A SAM's; 14.5-mm anti-aircraft machineguns; 23-mm

ZSU-23 antiaircraft guns; more than 200 ZSU-23/4 antiaircraft guns; 250 M1939 37-mm antiaircraft guns; 500 S-60 57-mm antiaircraft guns; more than 100 ZSU-57-2 antiaircraft guns; 200 KS-30 130-mm antiaircraft guns; P-14 Tall King, P-35 Bar Lock, P-15 Flat Face, and French TRS-2215 and TRS-2230 radars; and 30 Mirage F-1EQ, 80 J7, 70 MiG-21, 18 MiG-29, and 25 MiG-25 fighters.

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SECURITY SERVICES

Security Ministry Official on Counterintelligence Training

92UM1255A Moscow KRASNAYA ZVEZDA in Russian
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[Interview with Maj Gen Yuriy Nikolayevich Stepanov, chief of the Military Counterintelligence School, by A. Beklich: "Among Them James Bond Would Nearly Fail"]

[Text] "...I stared fixedly at his face and saw that, having put his finger on the trigger, he was calmly aiming at me. Obviously for him, armed with a submachine gun and very sure of himself, I with my Walter, which looked more like a toy cannon, was nothing more than a easy mark, a living target.

"I am certain that it did not even come into the scum's head that even with this clunker I could get three bullets into a tin can tossed into the air and that during the years of the war I had captured alive more than 100 parachute-dropped agents and they had resisted with the fierceness of condemned men.

"I beat him, possibly, by a fraction of a second and avoided his bullet. The bullets missed, but he almost killed me, the clever guy. In my mind I applauded him..."

(V. Bogomolov, "V avguste '44" [August '44], the chapter "Yevgeniy Tamantsev—Hit Man and Wolf Hound Nicknamed 'Quick Snatch'."

Certainly this is one of the favorite novels for our nation's men over the last 20 years or so. Who of us has not dreamed of being like his heroic Smersh [Death to Spies] officers, frontline counterintelligence officers, if only we knew "where we could learn from them."

Well, if among our readers and club members today there are those who live for such a dream and are plagued by the same question, you should know the answer: in Siberia! More specifically in Novosibirsk. And very specifically at the Higher Courses for Military Counterintelligence of the Russian Security Ministry.

At present we have as our guest (although, when it is a question of military counterintelligence, it is never certain who is the "guest" and who the "host") the Chief of this unique sort of school, Maj Gen Yuriy Nikolayevich Stepanov.

Biographic Data. (Cleared and public). Born in the Volga area. From a peasant family. Father killed in the Great Patriotic War. School. Work. A Soldier. Military school. A missile officer. The Higher Courses for Military Counterintelligence. Service. Studies at the Higher KGB School. Overseas tours of duty including Afghanistan. Again the Novosibirsk Higher Courses... People's deputy on the city soviet. The voters feel that he can do anything because of his profession. He can do a good deal, but not more. And at present there is very little to make the people happy.

[Beklich] Yuriy Nikolayevich, what is your view of the actions and deeds of the heroes in the novel by V. Bogomolov?

[Stepanov] I love them. But I understand what you are driving at, that as well there are absurdity and nonsense, and would such a thing be possible in reality?

It could be even harder. If you wish you could even find corrections in the official manuals for counterintelligence agents. But Bogomolov has created a work of literature...

In my life I have met many persons like his heroes. Personalities. Talents. Without special abilities and predispositions there is nothing to do in counterintelligence. Vision and inspiration are certainly not in last place. What if the concepts that I use are more suited for poets and artists? Counterintelligence is creative work. Delicate work. And hard. Spicy. And not without blood...

Yes, I want immediately to eliminate the question about specific names. I will not give away secrets. The representatives of our profession do not like to be in the public eye. In and of themselves, the names would not mean anything to you, and you must be able to tie them to specific facts, situations and events. But this would be a chance for our opponents to make a comparison, to analyze and draw conclusions and all of a sudden reliable ones...

[Beklich] But certainly it would be possible to touch lightly on the history of our counterintelligence? Or here is it a secret in a secret, a mystery in a mystery?

[Stepanov] That is part of it, too. But it is possible. And precisely 'touch lightly.' If we were to delve deeply into things, then the session of the club would last a long time, so interesting, attractive, rich in events and legends is the history of our counterintelligence, although compared with the analogous services, let us say, of Germany, England and France, it is a young one.

As it was, military counterintelligence as such did not exist in the Russian Army. Its first subunits appeared during the Russo-Japanese War. They were involved in

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...cting and eliminating Japanese spies and saboteurs. At the same time, they carried out intelligence functions.

...r, they...were abolished. Only in 1911 did the Russian Army create a Counterintelligence Directorate under the General Staff. And soon thereafter, the enemies of Russia began to realize that its co-workers had been up for lost time in agent-finding activities. The spies and saboteurs one after the other began to "pour out" and "disembowel themselves," as Tamantsev would put it in "August '44." The Japanese Special Forces were simply in shock when we unmasked and captured their uncatchable and most valued agent Ota-oka. At the start of World War I, Austrian Intelligence delivered a cruel knockout blow as an entire agent network of Russian Counterintelligence was operating successfully here.

...the European Secret Services, an alarm started as they did not understand how the Russians worked so successfully. But the secret was simple: Russian Army Counterintelligence followed its own path, it did not copy anyone, it did not imitate anyone, it sought out its own methods and its own principles for agent activities and the training of specialists.

...unfortunately, these traditions were not broken off after the Revolution. Moreover, the Soviet counterintelligence officers multiplied, creatively developed and improved them.

...he takes the Great Patriotic War, our frontline counterintelligence officers, I feel, completely "outclassed" the German Special Service. According to the formation of the Nazi Secret Service itself, one word—Smerish—was a demoralizing factor. You can feel and catch something of this in the word...

...as for peacetime... This generally does not exist in counterintelligence. Its co-workers live by a different sure, they have their own front, their own engagement, their own battle which will not likely be over soon. Continuing today. It is harder for these people now than ever before. The enemy, and it does exist, although words it does not "fraternize" with us, sets its hopes on impunity, on our present weakness and acts boldly provocatively. Why stand on ceremony with them who are now impotent and on their knees. And they are without restraint, confident that there will not be retribution. And they are amazed when the blows do reach their mark, when failures occur.

...certain that will be the case.

[Beklich] Can you tell us what demands are made on persons who desire to link their lives with military counterintelligence?

[Stepanov] I would particularly point to one. The first main one. The determining one. This person should have a love for his fatherland and he should have a deep sense of patriotism.

This is the only thing which cannot be "tested." We do have tests which, incidentally, "show up" a person like an X-ray. But a person is a person, and there is no way to "take" the whole man...

You cannot be mistaken in a person. During the existence of the courses, we have rarely erred. And they opened in 1935...

[Beklich] But how can one be admitted for studies? There is not a single line in the references of the institutions of learning.

[Stepanov] Now a word. That is the way we want it. We admit officers with a higher education not over the age of 28. An officer who wishes to be admitted to our school to study should apply to the Military Counterintelligence Department at his place of service. Our co-workers will provide the necessary help and will give advice and recommendations. They also have a list of questions and subjects which our future students must study. The history of our state, the history of foreign countries... Questions on the problems of international life. On philosophy, sociology and political science. Literature, art. Jurisprudence...

[Beklich] Of course, the future student must also be up in his physical training.

[Stepanov] Without fail. And also...weapons training...

We are a difficult task master. The subjects and disciplines are the most diverse. As you understand, I by far cannot speak about all of them. But I can say that we teach our students how to lay the table and use tableware.

A special place is given to special training. Here there is a number of disciplines.

Survival exercises. The counterintelligence officer should be able to carry out an assignment under any climatic conditions, in any region, in any locality. Often this must be done alone. He must be, for example, a crack tracker. Grass, trees, stones and stumps are not merely landscape objects for him. Remember the fine line in Nikolay Gumilev: "In each puddle there is the smell of the sea, in each stone the spirit of the desert." That is how the poet would put it. But for our brother officer, in looking at both, in the very stump or in the very stone they can install all sorts of listening, surveillance, transmitting and warning devices. Particularly if these stumps and stones are located at a secret installation...

A counterintelligence officer must know how to shoot well using any type of weapons, both our own and foreign. He must be able to shoot "by sound," "by light," with either hand, running, dropping and rolling, as they say, without looking and without aiming.

Hand-to-hand combat exercises are particularly popular and a favorite with the students. Our exercises follow the system of your old acquaintance Aleksey Alekseyevich

Kadochnikov. The exercises are run by his student and our graduate, Sr Lt Yuriy Korniyenko.

We also study marketing, management and the principles of ecology...

[Beklich] One gains the impression that if James Bond, Agent 007, were to study with us, he would nearly flunk out, so much does a military counterintelligence officer have to be able to do and know.

[Stepanov] For us, these overseas book and movie supermen and superagents are not the guide. Our guide is the real professionals from the special services, the special subunits of other armies and other states. We do not have the right to make concessions.

[Beklich] Yuriy Nikolayevich, in concluding may we ask several questions which, so to speak, are of a delicate sort. Until recently, you headed the only school of this sort in the nation known as the "USSR." It no longer exists. We see what there is. For whom will you train military counterintelligence officers now? For whose army?

[Stepanov] The answer lies in the present name of our school. We are also ready to help the other armies of the CIS countries. Although...

For example, Ukraine, I know, is already training its counterintelligence officers...

[Beklich] One other such question... You have undoubtedly asked it more than once of yourself. Would it be possible for your recent graduates by the force of fatal circumstances which so abound in our times to begin "working" against one another? Will yesterday's military comrade become the enemy which must be rendered harmless... By all possible means...

[Stepanov] One's soul is rent by these bitter, sharp questions. At present we do not have such information. It is to be hoped that the sacred ties of male fraternity and professional comradeship which link together the fate of our graduates will remain inviolate...

On this sad note, it seems our conversation is over.

[Beklich] Yes. Possibly we should at the end recall love? Your courses, we have heard, are still called "fiancee courses."

[Stepanov] Indeed, we have overlooked this fact. The girls from Novosibirsk are crazy about our fellows. We hold weddings. So it turns out that Love is still alive in our land. And this means life in the world itself. To live. To defend the fatherland.

Generally, we in counterintelligence are optimists.

Chief of MVD Spetsnaz Brigade on Role in North Ossetia

92UM1301A Moscow KRASNAYA ZVEZDA in Russian 23 Jul 92 First edition p 1

[Interview with Col Vladimir Vasilyev, commander of a spetsnaz brigade, by Lt Col Valentin Rudenko, KRASNAYA ZVEZDA correspondent: "Spetsnaz: There Will Be No New Karabakh in North Ossetia"]

[Text] During the past 4 years the special-purpose brigade of MVD [Ministry of Internal Affairs] internal troops has performed missions exclusively in hot spots. Baku, Tbilisi, Dushanbe, Mikhachkala, the Baltic area, Nagorno-Karabakh—these are the milestones on its combat path. And that is what it has been, a combat path, because it has been necessary to fight to establish peace and tranquility. How many times the spetsnaz troops have served as a buffer between warring sides, as the last hope for despairing and helpless people. In Fergana alone they saved the lives of tens of thousands of Meshet Turks.

The brigade is presently maintaining law and order in North Ossetia. Our correspondent interviewed Col Vladimir Vasilyev, brigade commander.

[Rudenko] Vladimir Aleksandrovich, when and under what circumstances were you transferred to North Ossetia?

[Vasilyev] The reason for the spetsnaz brigade's being here, as you could guess, is a drastic exacerbation of the crime situation, the emergence of armed formations of thugs and the illegal possession and transporting of combat weapons. A state of emergency was declared in North Ossetia on 11 June, and on 12 June we began setting up posts and patrolling in Mozdokskiy and Alagirskiy rayons.

I want to mention the fact that this time the brigade was transferred in a very well organized manner, quickly and, most importantly, on time. It took only 4 hours for us to arrive here with all the weapons and equipment. We thank the airmen of the military transport aviation for this. In the past we frequently arrived in the heat of things, when the thugs were already firing, pounding the homes of peaceful residents and killing innocent people. The situation is different now. Interacting with local authorities and the police, we are in complete control. The people have begun smiling for the first time of late. This does not mean that we have completely eliminated the armed raids by the aggressors, the illegal carrying of weapons or appeals for violence, however.

[Rudenko] I would like to hear in detail what steps are being taken to neutralize the groupings of thugs and other forces interested in igniting the international discord and building up tensions. How effective are they?

[Vasilyev] During the short time we have been here we have confiscated 18 weapons, mainly assault rifles, pistols, carbines and grenades, and consumer goods worth 50 million rubles with false documents or without any documents at all.

Mozdok is a commercial city. All routes into Chechnia, Ingushetia and South Ossetia pass through it. After we arrived the criminal elements, mafia structures supplying weapons, ammunition and various goods to those areas, had to find other ways of moving the illegal cargo. We have reliably cut off all of the main transport arteries. We inspect all state and private vehicles, without exception. And while we inspected 10,000-12,000 vehicles in a 24-hour period at first, the figure is now down to 4,000-5,000. This means that we have cut off someone's lifeblood. In addition, we help guard threshing facilities and sheep herds. There were cases in which thugs killed the shepherds and drove off the livestock.

You should see how much money flows through Mozdok at a time when there is nothing in the country with which to pay people their wages. You stop a vehicle and ask. "How much cash are you carrying?" "Somewhere around 420,000 rubles," they reply. You count it, and there is more than that. You ask whether the extra was for paying bribes. They do not answer.

[Rudenko] By the way, have there been attempts to bribe the servicemen?

[Vasilyev] Plenty of them. They offer 20,000, 30,000, even 50,000. If you do not want money, take goods—imported video equipment, for example. There has never been a case, however, in which someone from among the personnel of our brigade gave in to the temptation and made a deal with his conscience.

[Rudenko] I have visited several posts and seen for myself the difficult conditions under which your men have to

serve. I was struck by the fact that the presence of your brigade is like a bone in the throat to some.

[Vasilyev] Absolutely. We have received threats more than once. Things like "If you don't leave, we'll destroy the posts." Mobile groups have been fired upon. As the commander, my first duty is to protect the lives of my men. It is not important what that takes. During all of the conflicts the brigade has had three servicemen killed and three wounded. Including one here, Sgt Sergey Lemes. He was part of a mobile group pursuing thugs hauling weapons. Sergey was wounded in the arm during the capture. Two other bullets struck his bullet-proof vest.

We shall never fire upon ordinary people. We shall have no mercy on the groups of thugs who threaten us and peaceful citizens with their weapons, however. I explained all of this on local television.

[Rudenko] Who serves in the spetsnaz today?

[Vasilyev] With respect to nationality, they are mainly Russians, Ukrainians and Byelorussians. The latest recruitment consisted of all Russians, though. The average age of the enlisted men is 18-19; that of warrant officers and officers, 26-28. As a rule, recruitment for the brigade is voluntary.

In recent years more than 150 officers and warrant officers, soldiers and NCOs have been awarded combat orders and medals. This includes Hero of the Soviet Union Lt Oleg Babak, who covered a soldier against a thug's bullet with his body.

[Rudenko] One last question: When do you predict you will be returning to winter quarters? That is, to your permanent base?

[Vasilyev] I would rather not guess. It is up to the politicians to decide that. It is our job to prevent another Karabakh in North Ossetia. And we shall accomplish that.

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